

F38QB
C4c
1869

REVISED
Course of Instruction
1869

PROGRAMME OF PROMOTIONS.

<p>TENTH GRADE. <i>Average, 85; Minimum, 70.</i></p> <p>READING. SPELLING. WRITING. NUMBERS. MISCELLANEOUS.* AVERAGE.</p> <p>* Includes Music, Oral and Elementary Sounds.</p>	<p>NINTH GRADE. <i>Average, 85; Minimum, 70.</i></p> <p>READING. SPELLING.* WRITING. NUMBERS.* MISCELLANEOUS.† MUSIC. AVERAGE.</p> <p>* Both Oral and Written. † Includes Oral, Punctuation Marks and Elementary Sounds.</p>	<p>EIGHTH GRADE. <i>Average, 80; Minimum, 60.</i></p> <p>READING. SPELLING. WRITING. NUMBERS.* SLATE ARITH.† MISCELLANEOUS.†† MUSIC. AVERAGE.</p> <p>* Includes Tables and Combinations, both Oral and Written. † Reading and writing Arabic and Roman numbers, and Addition and Subtraction to limit of grade. †† Oral, Punctuation Marks, Capitals, and Elementary Sounds</p>
<p>SEVENTH GRADE. <i>Average, 80; Minimum, 60.</i></p> <p>READING. SPELLING.* WRITING. NUMBERS.** SLATE ARITH.† MISCELLANEOUS.†† MUSIC. AVERAGE.</p> <p>* 50 words from Speller and Reader—25 each. ** Tables and Combinations, Oral and Written; also, Mental Arithmetic—answers only. † To limit of Grade. See 8th Grade. †† Includes Oral, Punctuation, Capitals, Abbreviations and Elementary Sounds.</p>	<p>SIXTH GRADE. <i>Average, 80; Minimum, 60.</i></p> <p>READING. SPELLING.* WRITING. NUMBERS.** SLATE ARITH.† MISCELLANEOUS.†† MUSIC. AVERAGE.</p> <p>* Same as 7th Grade. ** Tables and Combinations, Oral and Written; Mental Arithmetic—answers mainly—analysis begun. † See 7th and 8th Grades. †† Same as 7th Grade.</p>	<p>FIFTH GRADE. <i>Average, 75; Minimum, 50.</i></p> <p>READING. SPELLING.* WRITING. MENTAL ARITH.** WRITTEN ARITH.† GEOGRAPHY. MISCELLANEOUS.†† ORAL. MUSIC. AVERAGE.</p> <p>* 30 to 35 words from Speller—20 to 15 from other text books. ** 5 questions requiring answers only; 5 difficult combinations; 5 for analysis—answers $\frac{1}{2}$, and analysis $\frac{1}{2}$—last 5 equaling other 10 questions. † Without Rules or Explanation. †† Includes Punctuation, Capitals, Abbreviations and Phonic Analysis.</p>
<p>FOURTH GRADE. <i>Average, 75; Minimum, 50.</i></p> <p>READING. SPELLING.* WRITING. MENTAL ARITH.† WRITTEN ARITH.†† GEOGRAPHY. GRAMMAR. MISCELLANEOUS. ORAL. MUSIC. AVERAGE.</p> <p>* 30 to 35 words from Speller, 20 to 15 from other text books. † 10 questions for answers only; 5 for analysis; last 5 to equal other 10. †† Includes Punctuation, Capitals, Abbreviations and Phonic Analysis.</p>	<p>THIRD GRADE. <i>Average, 70; Minimum, 50.</i></p> <p>READING. SPELLING.* WRITING. MENTAL ARITH.* WRITTEN ARITH. GEOGRAPHY. GRAMMAR. MISCELLANEOUS.* ORAL. MUSIC. AVERAGE.</p> <p>* Same as 4th Grade.</p>	<p>SECOND GRADE. <i>Average, 70; Minimum, 50.</i></p> <p>READING. SPELLING.* WRITING. MENTAL ARITH.* WRITTEN ARITH. GEOGRAPHY. GRAMMAR. HISTORY. MISCELLANEOUS.† MUSIC. AVERAGE.</p> <p>* Same as 4th Grade. † Includes Oral, Punctuation, Capitals, Abbreviations and Phonic Analysis.</p>

Miss Hannah

Chicago -

Feb. 1871 -



GRADED
COURSE OF INSTRUCTION

FOR THE

Public Schools of Chicago.

THIRD EDITION—REVISED.

ADOPTED BY THE BOARD OF EDUCATION, MAY 7, 1869.

CHICAGO :
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1869.

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PREFACE.

THE Graded Course of Instruction originally prepared by W. H. Wells, Esq., for eight years Superintendent of Schools of this city, has been twice modified, and yet in substance it is but little changed.

The work of revision has been carefully prosecuted during the past year. The experience of teachers has suggested modifications. The aid of teachers, in all parts of the revision, has been most cheerfully given, and it is most thankfully acknowledged.

To the Principals of all our schools much credit is due for timely suggestions and for valuable aid.

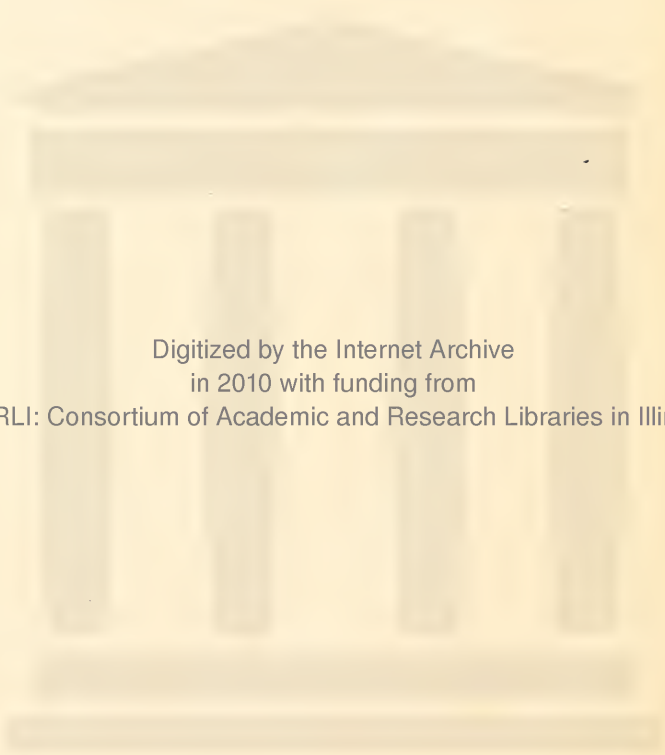
It is presented to the teachers for their guidance, in the belief that it is yet imperfect, but with the hope that in their hands its errors may be so corrected as to make it subserve the good of the schools and the advancement of sound learning.

In the Appendix will be found a list of the Text-Books used, and the portions of each allotted to each grade.

J. L. PICKARD,

SUPERINTENDENT SCHOOLS.

CHICAGO, *May*, 1869.



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INTRODUCTION.

WHAT CONSTITUTES AN EDUCATION.

THE opinions that prevail as to the nature of a good education are as various as are the estimates put upon human life and destiny. The extremes are found in the intensely animal man, who makes his study bear upon the sources of animal gratification, and who seeks to obtain skill in securing the means of gratification — and in the intensely spiritual man, who passes the life of a hermit in bewailing the existence of a body, and in attempting to crucify all those desires and affections that connect him with the things of this world. The latter is, without doubt, the nobler of the two, but to one who recognizes man's double nature, neither can be regarded as entirely satisfactory to man or to his Maker.

In general terms, that education is the best which best fits man to make the most of all his life relations. In other words, he is best educated who makes of himself the best son, the best brother, the best husband, the best father — the most successful artisan or tradesman — the most useful member of society — the best citizen — the most enlightened patriot — the most intelligent lover of his race and of God. In pursuit of such an education the studies of our schools serve as efficient means towards an end, but they are not the end sought.

Those who make Arithmetic, Grammar, Geography and History, Natural Science, Classics or Metaphysics, the end of their study, will never attain a good education. All these have some intrinsic value. The necessities of trade and of commerce make Arithmetic and Navigation valuable in themselves. Our social relations make knowledge of the rules of

speech very desirable. Knowledge of Geography and History is essential to one who would become an intelligent citizen, more especially in this land where the citizen is responsible for the conduct of public affairs; added to this, the knowledge of other times and of other lands, much of which is locked up in forms strange to us, may be made available through the study of Ancient Classics. The principles of Chemistry are of value to one whose lungs and whose stomach are vast laboratories, as well as to one who would, from the hard soil, bring forth the materials to be wrought over into bone, and muscle, and strength. So in each department the study has some value in itself considered, and the more one knows of books the better, if he stops not with the books, and makes not the acquisition of their contents the end of his study. What others have written, and said, and done, may help us toward the end of study—the ability to write, to say, and to do of ourselves. Books are as needful to the mind as is food to the body; useless, unless digested, and made a part of ourselves—nay, sometimes worse than useless, as undigested food is often the source of a positive injury. The proper question for each teacher to ask is, not how much have my pupils swallowed, but how much have they digested—not how full are they, but how much strength have they gained—not how many rules have they committed, but how many principles have they mastered—not how far have they traveled, but how much have they observed by the way—not how much more do they know, but how much better have they become. The higher and better uses of all studies are their indirect uses, the benefits that flow through their proper prosecution, in greater power of attention, enlarged comprehension, quickened curiosity, greater self-control, and wider and more far-reaching influence over others. We are told that knowledge of self is the best knowledge. The best self-knowledge is consciousness of power in all departments of our being. He who is conscious of the most of this power, has the best education, no matter what his merely scholastic attainments may be.

I have thus far spoken of books as means to a good edu-

cation, but there are other means to this end which no good teacher will overlook or lightly esteem. The teacher is studied more than all the books used in our schools, and order, neatness, cleanliness, quiet earnestness, punctuality, truthfulness, self-respect, self-control, obedience to rule, kindness, forbearance, courtesy, considerateness, affability, politeness, sympathy and love wrought into the life of the teacher, so as to be recognized at all times as a part of his very being, will do more toward improving the character and developing the power of the student than all other agencies combined. The absence of any of the qualities named above does seriously impair the influence of the teacher, however great it may be in other respects, and the very best instruction in matters treated of in books can not atone for the lack of a good personal influence.

THE GRADED SYSTEM.

That system is essential to success in any course of study, is apparent to all. All attempts at systematizing a course of study must have some attendant evils. But these are rather accompaniments, than necessary results.

A brief notice of such evils may help toward their eradication.

The Graded System cuts up the work of teaching into parts, which may easily become disjointed fragments, even in the hands of teachers who strive to be faithful in the performance of their allotted work. The tendency of the system, fostered somewhat by our imperfect human nature, is to make the teacher feel that his predecessor *has finished* the work assigned him, and that he has a work *to finish* for his successor. Hence each does his work without much regard to the work of others. This view of the system is a false view. The work is one work, and each part has its relations to, and bearings upon, every other part. There must, therefore, be a *review* of the past, that it may be more firmly connected with the present, and the future must be constantly present to the mind of the teacher, that his work may be preparatory to that

which is to follow. This is not like that division of manual labor, in which each does his work according to a given pattern, not knowing or thinking how his work is to be fitted to that of his fellow, but like that of the architect, who lays out his plans upon separate sheets, but in preparing each he has remembered the previous one, and has had his mind upon that which is to follow, so that each is fitted to each, and when the work is completed there will be no lack of beauty, or of strength.

The teacher of each grade should be sure that the pupil, intrusted to his care, understands fully the work of the previous grades, and, at the same time, he must remember that his work is preparatory to that of higher grades. The difficulties to be mastered, the obstacles to be surmounted, must be present to the mind of each, that the pupils may, while receiving instruction, be gaining strength also for future need. Let each teacher bear in mind that his work is two-fold: *First*—to impart knowledge; and, *Second*—to develop strength, and this evil will be entirely eradicated.

Familiarity with the subjects of a grade may lead to a little letting down of the teacher's watch, and a lack of study. The topics can never be so thoroughly mastered but that something new may be learned; at least some new illustration, some new method of presentation, some change of order may be gained by fresh and often-renewed study. In each new class will be found some new phase of character, some mental peculiarity never before presented; and the teacher who sits down in the belief that he has long ago learned all that can be learned of the topics assigned, or of the wants and the capabilities of children, will soon have enough of that contempt which is begotten of familiarity, and will find his task growing less and less pleasant, and his success less marked. He, who keeps alive his interest in the work of a single grade, for any length of time, must put forth more effort than he who has a greater range or frequent changes. But this greater effort will make him a more valuable teacher. Let each so cultivate his own powers as that his interest may be ever fresh and absorbing, and this second evil may be eradicated.

The iron limits of the Graded Course serve as bars to some who, from lack of early advantages, desire to go faster than their classmates are able to do, and to others who, from limited opportunities, wish to pursue certain portions of each grade, neglecting others that seem to them least important. The greatest good of the greatest number is the rule; but to meet these exceptional cases, which are really rare, some provision may be made, such as the good sense of the teacher or the knowledge of the Principal of the school would suggest. The rules of the Board seem wisely adapted to such exigencies. During a portion of the year evening schools are maintained that meet the wants of many, so that this evil does not weigh with any great force against the system.

It is almost certain, that were ungraded or unclassified schools established for the benefit of those who could not pursue the graded course, they would be filled with many who are now in our schools, but who would, under such circumstances, be withdrawn on account of avarice, or from other equally bad cause, to their own detriment and to the injury of society. This evil is rather imaginary than real, especially with the provisions already adopted by the Board.

GENERAL SUGGESTIONS SUITABLE FOR ALL GRADES.

IN the work laid out for teachers by this little book, it is desired that each give to the schools his best service. Results only are required. Methods are left to the individual tact of the teacher. The suggestions which follow are the result of the experience of many individuals, and they may be safely adopted by many others, and yet, in some particulars, a better way may be found. All are encouraged to find that better way, and to pursue it when found. That way is best for each by which he may soonest attain the end sought — a thorough mastery of the work assigned. It is not supposed that all teachers will pursue, with equal success, any prescribed methods of instruction. Each must work in his own way, while all labor for the accomplishment of the same end — thorough scholarship and complete manhood. It is not necessary to add, that the suggestions herewith given are not positive precepts, but hints as to good methods that may serve a good purpose to such as have not found better methods.

§ 1. ORDER IN SCHOOL-ROOM.

In all the exercises of the school-room, order is of the first importance. It is *often* the case that that school is best governed in which there is the least apparent show of attempt to govern. It is *certain* that a noisy teacher will have a noisy school. Constant and nervous calls to order only make the repetition of such calls more and more necessary. The voice of the teacher should seldom be heard in securing the attention of pupils, and rarely, if ever, above the natural key. The bell

in the hand of the teacher should not be rung as though the necessity for some sudden alarm existed, but a single tap, or a succession of light and constantly lighter taps, will suffice with a teacher who can stand calm and self-possessed in the presence of the school. Quiet and patient demeanor is worth more than bluster. If a scholar needs reproof for idleness or inattention, the fixed gaze of the teacher upon such scholar until his roving eye rests upon him, will, in the majority of cases, serve the purpose better than calling the name of the pupil. Frequent calling of the names of disorderly pupils often creates more disorder than it cures, since it distracts the attention of others, who would not otherwise have been disturbed.

Some general directions may here be given as to signals, by which the movements of pupils may be directed. For recesses, opening and closing school, these may all be given by the large bell in the hall. For exercises in rooms where there is a musical instrument, all the movements may be directed by signals given from the instrument. In all other cases, when the teacher directs the movements of his room, the use of what may be called initial signals is recommended. If he wishes a class to give attention, "A;" to turn in their seats, "T;" to rise, "R;" to get in proper line for marching, or for any other purpose, "L;" to move or march, "M;" to face about and change direction of movement, "F;" to halt, "H;" to sit, "S." In all cases, the signal is the initial letter of the word of command. Preparatory to marching, some measures may be counted that shall indicate the desired speed, thus: 1, 2; 1, 2; 1, 2; 1, "M."

§ 2. SCHOOL DISCIPLINE.

The school differs not from the State, so far as regards the necessity for the establishment and enforcement of law. In the school the citizen receives his first training, and he must there take lessons in obedience to rightfully constituted authority. The school must be subject to law. Law without penalty is a dead letter. Penalties must be adapted to the nature of

the offence, and proportioned to its degree. The whole study of those who execute laws should be to secure the most healthful obedience by the use of the least penalties both in kind and in degree. As a general rule, no punishment should be inflicted which tends to make the offender less obedient than before — none which will disgrace him in the eyes of those whose respect he has not forfeited by his offence (and hence the punishment should not be more public than the offence) — and none which in its infliction throws the offender into the very associations which have made him an offender (such as turning a child from school into the street), unless the greater good of the greater number absolutely requires it. Infliction of physical pain has been, from time immemorial, an accepted mode of punishment. It is liable to abuse, and for that reason should be discouraged wherever a substitute free from the same liability and less degrading in its nature can be used. All kinds of punishment must, from the very nature of the case, be more or less degrading, but they are far less so than are the offences which give occasion for their use. If, by proper punishment, therefore, the offender shall be brought into cheerful obedience, his degradation is stayed, and good results.

The necessity for any kind of punishment diminishes just in proportion as the public sentiment of the school sustains the teacher's authority. Give pupils to understand, either directly or by implication, that the teacher has not the right to enforce obedience, and all discipline is at an end.

Corporal punishment may be resorted to in extreme cases, and after all other means have proved unavailing, and but a single caution is needed. Let it be inflicted at some fixed time, long enough after the offence to allow time for calm and sober reflection on the part of both teacher and pupil. The necessity for it may have passed before the time arrives, in voluntary confession of wrong on the part of the pupil, or it may be of the teacher (for it is possible that the teacher may be wrong), or in the discovery of some substitute that may serve the same purpose with better effect upon both pupil and teacher. Confession of wrong done never should weaken the respect of the teacher for the

pupil, and will never weaken the authority of the teacher who may have erred. All punishments which inflict bodily pain must be considered as corporal punishments. Punishment should never be inflicted upon the head of a child, or in the vicinity of any of the more exposed vital organs. It should always be reasonable, and adapted to the offence committed. If any teacher cherish the laudable purpose to govern without corporal punishment, it is better that such purpose be kept a secret from the pupils. No good can come from telling the pupils of such a purpose, and much harm may result.

§ 3. PHYSICAL CULTURE.

The real wants and necessities of the body should receive the teacher's earnest attention. It will not suffice to give a few minutes each day to exercises designed to relieve weariness, and to start into new activity the sluggish vital fluids. Such exercises are very important, but none the less so is the posture of the pupil while studying. Serious injuries often result from neglect of the pupil's posture at his desk. An easy, graceful posture is always the most healthful. There should be no constrained precision, nor, on the other hand, awkward lounging. The habit, allowed by some teachers in pupils who sit with curved spine and with the face resting nearly upon the book, is extremely injurious. The eye falls forward in the socket, and the sight is often seriously impaired by this unnatural position.

Physical exercises should be given with greater or less frequency, according to the age of the pupil and the atmospheric conditions of the day.

Change of posture and activity are essential in these physical exercises. All the pupils, except such as may be excused on account of ill health, should be required to participate, and to enter into them with energy and promptness. No good comes from any other than a lively and spirited exercise. The teacher should lead the pupil, inasmuch as he needs the exercise nearly as much as they, and, still farther, because his own interest will awaken interest on the part of the pupils. As to

kinds of exercise, there is variety enough in the schools, and any teacher, who is not acquainted with the best forms, can readily learn them from more experienced teachers. In teaching the different series of movements, the initial letters may be used : as, "U" for Upward, "D" for Downward, "F" for Forward, "B" for Backward, etc., etc. "R U" would indicate Right hand up, "L D," Left hand down, etc., etc., or the full words may be given until the class is familiar with the order. Music or counting should accompany the exercise.

In the Appendix will be found series of exercises for Free Gymnastics, that may be used with such variations as may be thought best. The teacher should not fail to make use of other exercises, so arranged as to meet the necessities of the pupils and the arrangement of the school-room.

§ 4. MORALS AND MANNERS.

No part of the teacher's work requires more watchfulness, and more painstaking, than that of shaping the child's moral character. In this work self-culture, on the part of the teacher, will insure success. The live teacher is reproduced in every child brought under his influence. The child's confiding nature makes him specially susceptible to the teacher's example. Unlike other parts of the work, this can have no set time assigned it in the programme of daily exercises. Set lectures upon kindness, gentleness, benevolence, or any other desirable quality, will not counteract the influence of a single harsh word, an angry gesture, or a selfish act. Good qualities gain strength by exercise, and their exercise should be encouraged.

Love to parents and others, friendship, kindness, gentleness, obedience, honesty, truthfulness, generosity, self-denial, neatness, diligence, etc., are cultivated in children, not so much by direct exhortation and formal precept, as by resorting to expedients that will call these affections and qualities into active exercise. Lead a child to do a kind act, and you will increase his kindness of heart; and this is the best of all

lessons on kindness. Let teachers ever remember, that the *exercise of virtuous principles confirmed into habit*, is the true means of establishing a virtuous character.

Little anecdotes, and familiar examples, illustrating the love of brothers and sisters, the respect due to the aged, kindness to animals, mutual love of companions and associates, benevolence, etc., are among the best means of cultivating these virtues. Teaching mainly by example will accomplish far more than any formal catechism of moral instruction.

Teachers should frequently read to their divisions short, entertaining narratives, and make them the subject of familiar and instructive conversations with their pupils. So also in lessons on animals, trees, and all the works of nature, opportunities should be constantly improved to show the wisdom, power, and goodness of the Creator, and to inculcate the reverence that is due to Him, and a sense of dependence upon Him.

Every case of quarreling, cruelty, fraud, profanity, and vulgarity, should be made to appear in its true light. The selfishness of children is the greatest obstacle to moral training. To moderate this strong instinct, to teach self-denial and self-control, must be the constant care of the teacher.

There is no time when the watchfulness of the teacher is more necessary than during the recesses, and other hours of relaxation at school. This is the time when little differences are most likely to spring up, and bad passions to gain the ascendancy. No parent's eye is upon the children, and yet they should constantly feel that some kind guardian is near — not to check their cheerful sports, but to encourage every kind and noble act, and to rebuke every departure from the path of virtue and honor.

Good manners are intimately connected with *good morals*, and teachers should improve every opportunity to inculcate lessons of civility and courtesy. In the primary divisions, especially, the teacher should give frequent and somewhat minute directions respecting the ordinary rules of politeness. Let the pupils be taught that when a question is asked them, it shows a lack of good breeding to remain silent, or to shake

the head, even if they are not able to answer it. They should receive some general directions respecting the manners of younger persons in the presence of those who are older. They should be taught that well-bred persons seldom laugh at mistakes, etc. The manners of the children, in their intercourse with each other before and after school, and at the recesses, and in going to and from school, should receive the constant and watchful care of the teacher.

The position of the pupil in his seat, his movements in passing to and from the class, his position in class, or at his seat, when called upon to recite, should receive the teacher's most careful scrutiny. Bad manners open the door for the entrance of bad morals, and all listless and lounging habits in the school-room are but the sure indication of a loaferish spirit, which, unchecked, will lead to vicious associates and practices. The teacher should respect himself too much to receive any answer from a pupil who is not in a manly posture, and who does not, in his tone and manner, express sincere respect, both for his teacher and for the place he holds among his fellows. Nor can the teacher keep too constantly in mind the truth uttered by Marcel — "Nature, reason, and experience proclaim this order, *example before precept*."

No teacher can expect to make his pupils more civil, more courteous, or more truthful and virtuous, than he shows himself to be. In dress, in movement, in speech, in thought even, he must *be* what he would have his pupils *become*.

§ 5. GOOD LANGUAGE.

The importance of this subject can not be overestimated. Every exercise of the school-room, in which words are either spoken or written, should be made an exercise in the use of language. It is thus made a matter of habit rather than of technical study.

The most thorough study of the rules of syntax, the most careful analysis in later years, will not correct the bad habits formed in childhood. Many a man skilled in the use of language has never studied for an hour an English Grammar,

while many who can parse any sentence given them, affixing the rule for each word, and giving to each rule its proper number, make constant and egregious blunders in their everyday talking or writing. The habits formed in early life are the ground of this difference.

In this, as in all other parts of the teacher's work, example is better than precept, and yet a good example may be most effectively sustained by wholesome precepts.

The following words of HON. J. G. McMYNN are eminently practical and suggestive :

"Great attention should be given to the language used in the school-room, both by teachers and pupils. It should be pure English, free from all provincialisms; and the construction of the sentences should be grammatical. It is of the utmost importance that the teachers of our primary scholars should be accurate in the use of language; quick to notice, and prompt to correct, all 'bad grammar' heard in their school-rooms. No *slang*, no useless expletives, no unnecessary repetition, no obsolete words, no violations of orthography or syntax, should, at *any time*, or under any circumstances, be allowed to pass without careful correction. The power of expression may be cultivated by 'Object Lessons' and conversation. Pupils should also be advised and required to write much. Recitations may sometimes be conducted by writing, and will be found profitable. Questions should be pointed and precise; answers should be concise and exact. Every answer should embrace a complete proposition. Frequently the pupil gives the answer only in part. Every exercise, and every recitation, should be so conducted as to habituate the scholars to correct, terse, and elegant modes of expression. All indistinctness of utterance, all clipping of words, all hesitancy of speech, should at once be noticed, and the proper remedies faithfully applied."

§ 6. MENTAL DISCIPLINE.

THE highest ultimate object of intellectual education is mental discipline; and this discipline can only be acquired by mental labor. Examples are frequently arising in which teachers give assistance that is not required, and thus rob the pupils of the discipline which they would gain by overcoming the difficulties themselves. Teachers should study carefully the capabilities of their pupils, and never do for them what they are able to do without assistance. Pupils should also be

guarded against the dangerous habit of assisting one another, without the knowledge and approval of the teacher.

It is also true that some pupils suffer from the want of a little assistance given at the proper time and in the proper way. This should never be direct, but, by starting back to some point which the pupil does understand, let him be led up to the difficulty in his path by careful steps, which he shall take for himself. These steps may be simple illustrations of what he does understand, and yet, in principle similar to the difficulties to be encountered. By overcoming these, he may gain strength to overcome the greater, and a little care and time taken to-day may save time and care for all future days. The principal difficulties in a pupil's path lie in his inability to apply principles to examples that vary in form and phraseology from the illustrations given him when he learned those principles. The similarity of the examples should be shown the pupil, and he will thus be prepared to do what before he thought he could not do.

It is one of the most important duties of the teacher to exercise a watchful care over the pupils' hours and habits of study. Some pupils never learn to study a lesson abstractedly and with the whole mind; and some teachers have heretofore been so unfortunate as not to know that they have any special responsibility in this matter.

The power of attention is essential to the successful prosecution of study at every stage of progress, and the best efforts of teachers should be directed to the cultivation of this great educational power.

The teacher must have an end in view in every recitation, must understand what course to pursue in reaching that end, and the pupil must be held in that course strictly.

In these days there is too much *lifting over* hard places, not enough *plodding through* them. Every obstacle removed from the path of a child by an overkind teacher weakens the child's mind.

§ 7. DIVISIONS, CLASSES, AND RECITATIONS.

1. *Number of Classes in a Division.*—As a general rule, the pupils assigned to each teacher in the Grammar Department should be divided into two classes: in the 5th, 6th, 7th and 8th grades, into three classes; and in the 9th and 10th grades into four.

The number of pupils in a division, or other circumstances, may make it desirable, in certain cases, to depart from this arrangement.

2. *Number of Branches to be pursued at the same time.*—Under the present classification no alternation of studies will be found necessary, with, perhaps, the single exception in the higher grades of Geography and History. It is impossible so to arrange the course as to make the carrying forward of these two studies at the same time absolutely essential or desirable. The one may be completed and its place given to the other somewhere near the middle of the time allotted to the grade without detriment, and such a course is advised. The study of United States History will, of course, involve the review of the Geography of the United States. Further than that, the two studies have no connection until the High School Class is reached, when the outlines of General History will call for a review of Geography as a whole.

In all other respects the studies of the several grades should be kept along as uniformly as possible. The course of study is arranged with reference to the mental wants of the child, and variety is essential to progress.

3. *Order of Exercises and Length of Recitations.*—Every teacher should have posted up in the room an established order of exercises for each day in the week, assigning a definite time for the beginning and ending of every exercise, and of every interval between the exercises, and this order should assign also definitely the times for study, and topics of study, as well as of recitation:

It is impracticable to establish a uniform rule respecting the frequency and length of recitations. The following scale will serve as a general guide to teachers in this matter :

Recitations in the Grammar Department from twenty-five to forty minutes in length, except exercises in spelling, which may usually be completed in from fifteen to twenty-five minutes; in the 5th, 6th and 7th grades, from twenty to twenty-five minutes; in the 8th and 9th grades, from fifteen to twenty minutes; and in the 10th grade, from ten to fifteen minutes.

4. *Division of Time and Labor.*—In deciding what proportion of time shall be given to spelling by letters, what to spelling by sounds, to reading, to numbers, to geography, etc., the rule should be this: Whenever a class is less advanced in one branch assigned to the division than in other branches, let that particular branch receive special attention till it is as familiar as the others. It is very common to find a class more advanced in reading than in numbers, and still devoting less attention to arithmetic than to reading; the observance of this rule will correct all such errors.

§ 8. RECITATIONS AND USE OF TEXT-BOOKS.

In each department of study, the Text-Book employed furnishes suitable topics, properly arranged, and clothed in appropriate language. It becomes thus a fit study for teacher and pupil. The latter studies that he may learn new facts; the former, that he may find new methods of illustration, and may discover new paths through which the pupil may be led to the clearest comprehension of the facts learned, to the fullest appreciation of their value, and to the best understanding of their relations to other facts previously learned. The knowledge of the teacher should be so full and comprehensive that he may assign recitations of proper length, and then conduct the recitations to the best advantage. This implies such familiarity with the topics studied as to render the Text-Book useless to the teacher during recitation—even a hindrance rather than a help. The true teacher will not use a Text-Book in recitations upon such topics as would make the use of the open book improper on the part of the pupil. His knowledge of the lesson assigned should be at least equal to what he requires of his pupils. The teacher who is confined to the

Text-Book during a recitation, puts a damper upon the enthusiasm of his class. How can he awaken interest in any topic upon which, by his own confession, his pupils know more than himself? The proper place for most text-books is in the teacher's study, and upon the pupil's desk during study hours. At recitation, with the exceptions of reading, grammatical analysis, and translation of classics, text-books should be laid aside by teacher and pupil alike.

Before the recitation, the teacher will have arranged the divisions of the subject treated of in the lesson assigned, and he will then hold his pupils to the order he shall have determined to be the best, requiring not always the identical language of the author, but something equally exact and comprehensive. In mathematical studies, the recitation should consist largely of exercises illustrative of the principles of the text-book, involving the same processes, but varied in figures and in verbal statement from the exercises given by the author.

The teacher's aim will be to test the pupil's knowledge of the subject studied, to correct any misapprehensions he may have fallen into while studying, to ascertain what difficulties have been encountered, and to guide the pupil to the means, by use of which he may gain complete mastery over his difficulties. These things admitted, it follows, as matter of course, that the recitation hour is not a lecture hour, during which the pupil is to receive, passively, the instructions of the teacher; nor is it the hour devoted to the solution of all difficult problems deferred till this time by indolent students; nor yet is it the time for a parrot-like repetition of what the author says. In almost every recitation the pupil should be required to trace the relation of some new fact to previously learned principles. The surest course out of any difficulty is to lead the pupil back to ground with which he is familiar, and thus by skillful questioning to let the light in upon his mind.

Recitations should not be continued after the teacher has failed to fix, or to hold, the attention of the majority of his class.

Questions should be so put as to require thought upon the part of all the class, and not alone upon the part of him whose

turn has come to answer. As far as possible, all routine questioning should be discarded, and every pupil be made to feel that he may be called upon to answer any and every question asked.

§ 9. READING.

Every good reader aims first to comprehend the thoughts of the author he reads, and then to convey to others an intelligible idea of the author's meaning. The training of the pupil in reading, therefore, involves two distinct and yet inseparable kinds of instruction. Mental discipline and vocal discipline must be carried along together. Thought and its expression must be considered at one and the same time. *Some* thought may be expressed by any sort of utterance, but *the* thought of the author requires vocal organs under complete subjection to the understanding. To read well, one must know what he is reading, and must have such complete mastery of his vocal organs as to make them faithful servants ready to do his bidding without mistake of any kind. No dull, listless, unthinking scholar can ever become a good reader. The teacher's first work is to awaken thought. Something the child can understand should be selected as a reading lesson. It is not necessary that the lesson selected be one already understood; it should be one in advance of the child's present ability, but within the reach of his comprehension. We oftener underrate than overrate the *ability* of pupils, while the reverse is true as regards their actual *growth* or *progress*.

Children who become expert in the utterance of sentences that contain no thought make no mental progress. There must be obstacles thrown in the child's path, or he will gain no strength. If all be leveled and smoothed for him, his monotonous style of reading is but the outgrowth of an inactive, sluggish mind. The teacher should bring the pupil into the face of the difficulties in his lesson and encourage him to battle, rallying him again and again, if need be, to the contest, until victory crowns his efforts.

To test the accuracy of the child's knowledge of what he

reads, he should be encouraged to read sentences, substituting for some selected words, words of his own choosing, that shall change the form but not the meaning of the passage. This exercise may embrace at first but a single word in each sentence, and then may be extended as the capacity of the pupil may seem to warrant, until nearly or quite all the words are changed. In the more advanced classes, poetical selections may be changed into prose. While the definitions given by the author should not be neglected, the child should be encouraged, as far as possible, to give definitions of his own, and should be permitted, as indicated above, to put his definitions into the place of the words defined, and then to read the sentences he has changed. This test may be still further extended by requiring the pupil to embody the selected words in sentences of his own construction.

If the teacher finds difficulty in securing proper expression in any particular case, the remedy may be found in asking a question, the proper answer to which would be the difficult passage, and in requiring the pupil to give the passage as an answer to the question asked.

The voice of the teacher should be frequently heard in every reading exercise, as an example for the scholars to imitate. If any teachers are conscious of imperfect articulation or expression, they should seek every means of correction within their reach.

There are those who have superior ability and success as teachers of reading, whose methods and whose experience may be made available by those of less experience or less success. In this branch, more than in any other, models may be safely followed. Teachers may learn, as their pupils must learn, by imitating good models. Mere repetition of a badly read sentence does no good, unless the fault be distinctly marked out, and the correct reading be given by the teacher, or by some member of the class who has mastered the difficulty. Good readers in a class may be permitted to give the model. This course often secures the desired result sooner than any other.

Too much concert reading leads to the formation of bad

habits, and to the cultivation of unnatural tones of voice. The forward raise their voices to an unnatural key, lest their superior reading should not be heard; while the diffident and distrustful drop their voices into a lower than natural key, lest they should make some mistake and mar the general effect, and the lazy move their lips that they may appear to read, while not a sound escapes their moving lips. Concert reading should not be discarded, but should be carried just so far as it can be done without encouraging monotonous and measured reading. Short sentences are much better for concert practice than long ones, since they do not require measured divisions. Every teacher should make strenuous effort to secure good reading of a whole class in concert, but should check such reading the instant it falls into measured monotone, or develops in any pupil unnatural tones of voice. The advantages of concert reading will not pay for a single bad habit formed by its careless use. The attention of the class may be kept by other methods, one of which is of importance in other recitations as well—that is, calling upon scholars out of their regular order of standing or sitting, and, if need be, calling upon the same person two or three times, until the impression that he will be called on but once is entirely dissipated. Answers to general questions connected with reading lessons may be given in concert. The enunciation of elemental sounds may also be given in concert. Poetical selections which are already measured, may be read in concert with less difficulty and with less danger than prose.

While a class is engaged in reading, the undivided attention of the teacher should be given to it. If the attention of the teacher be called away necessarily, the exercise should be suspended.

Children should be encouraged to criticise each other fairly and justly. Raising the hand during the progress of the reading should not be allowed, but, at its close, those who have noticed errors should have an opportunity of correcting them, provided always that the critic can illustrate his own criticism. This should be occasionally tested.

An excellent teacher gives as the result of her experience

this important caution, "Children must be taught to open their mouths before they can become good readers." The importance and value of this suggestion are fully confirmed by the experience of all good teachers, and this introduces also the important topic of distinct articulation.

Frequent exercises, varied according to the advancement of pupils, in the utterance of elementary sounds, single and combined, should be most faithfully attended to before each exercise in reading. This may be more fully treated under the instructions with reference to the several grades. While good articulation is not the *end* of reading, it is an essential *means*, and one without which the true end — expression of thought — can never be attained.

There is no fault more common in reading than that of stumbling, hesitating, catching and repeating. It is but one fault, and teachers should use every effort to break it up. The moment the child shows the first symptoms, his case should be carefully but immediately considered, and strict attention at once given to its cure. It sometimes arises from the child's vocal organs getting the start of his thoughts, and should be cured by a little hard study, until the pupil becomes familiar enough with the thought to have his mind keep ahead of his voice. It sometimes arises from pure carelessness, and its cure needs no mention. It often arises from the use of books in advance of the child's capacity, so that reading becomes mere utterance, without so much as a thought creeping in even behind a word uttered. The case suggests its own remedy. It sometimes arises from indulgence in a similar habit in all other recitations.

Whatever its cause, its cure must be certain, or no progress is made, but on the other hand constant retrogression.

§ 10. SPELLING.

As the English language is constructed, the spelling of its words is by no means easy of acquisition. No system of classification of words has yet been invented that will aid the student very materially. He must memorize all the primitive

words he would use, and also all the prefixes and suffixes employed in the structure of derivative words. After these are committed to memory he can bring to his aid rules, with many exceptions, for the proper joining of prefix and suffix to the primitive word.

It would be a blessing to the little ones, who are compelled to spend years in learning to spell, if, in a night, the present structure of words could be forgotten, and if, in the work of reconstruction, "the best writers" would present to the eye only such characters as represent the sounds uttered by "the best speakers." The child would be required then to learn but one language, instead of two, as at present.

But teachers must take the language as it has been given them, and, if possible, save their pupils the disgrace attached to poor spelling. Unless a correct habit of spelling is formed in early life, there is little probability that it will ever be acquired. Hence special pains must be taken, with every written exercise, that every word be properly spelled.

Written exercises are of more value than oral exercises in spelling, and yet the former should never supplant the latter. The order of the letters in a word may be memorized as successfully by aid of the ear *alone* as by aid of the eye *alone*, and still more successfully by aid of both combined.

In spelling, teachers should avoid the use of any unnatural tones of voice, and should pronounce the words as they would read them if they were reading aloud. This will secure the attention of the scholars better than it can be done by any other method.

In giving out the words to a class, teachers sometimes commit the error of departing from the ordinary pronunciation, for the sake of indicating the orthography. Thus, in the word *variance*, the vowel in the second syllable is given very distinctly as long *i*, to show that the letter is *i* and not *e*. The words should, in all cases, be pronounced according to the standard dictionary used in the schools.

In conducting oral exercises in spelling, pupils should pronounce each word distinctly before spelling it, and they should never be allowed to try twice on a word. Whenever a pupil

misses a word, let him afterwards be required to spell it correctly. This may be done as soon as the correction is made in the class, or deferred till the close of the recitation.

An excellent plan is for the teacher to pay no apparent attention to the misspelling, but pronounce the next word in order, and so on, until some pupil, who has noticed the error, spells the misspelled word instead of the one pronounced for him by the teacher, and for this correction he should receive some credit, either by going above all whom the word has passed, and the one who first misspelled it, or by changing places with the one who committed the error, or, if no change of place be allowed, by some mark of credit. The teacher should, in all cases, keep track of the misspelled words, and see that they are not entirely passed over. In all cases of a misspelled word under this practice, each pupil, who has allowed the word to pass him, should be required to spell it correctly before the recitation closes, if there be time, if not, at the next recitation.

Special attention should be given to syllabication, in connection with oral spelling. Pupils should syllabicate in all cases, as in the following example: *a-m am, p-l i pli, ampli, f-y fy, amplify*. Nor should there be the least deviation from this rule in cases where the syllable contains but a single letter, as in *element — e-l el, e e, ele, m-e-n-t ment, element*. The reason for this will be specially apparent in words in which the sound of the syllable is not the same as the sound of the name of the letter, and it will appear more important still if we consider this syllabication as an efficient help to distinct and correct articulation in reading.

As pupils are constantly liable to misunderstand the pronunciation of words, it is a very useful practice, in all written exercises, to call on some pupil in the back part of the room to re-pronounce each word distinctly, as soon as it is pronounced by the teacher.

Syllabication in written spelling has but one use, that of determining the place of division of words when a word occupies parts of two lines. With present practice this is of such rare occurrence that it does not compensate for the time spent

in syllabication, nor does it warrant the unnatural appearance of words so divided. Besides, any person having learned syllabication in connection with oral spelling need never make mistakes in writing, where the necessity of dividing words arises.

However thorough the drill in spelling may be, from the lessons of the speller and reader, every teacher should have frequent and copious exercises in spelling words from other sources. These should be words in common use, chosen, as far as possible, from the range of the pupil's observation, including the new words that arise in object lessons, and in geography, arithmetic, grammar, etc. The more difficult of these words should be written in columns on the blackboard, and studied and reviewed with the same care as lessons from the speller and reader. Failures in spelling these words should be marked with errors, the same as failures in any other lessons.

Teachers should put forth their best efforts, especially in primary classes, to secure the attention of the pupils, and render the lessons as interesting as possible. Occasional exercises in "choosing sides," when properly conducted, may be made highly useful. The exercises of "spelling down" a class may be resorted to occasionally with good effect.

If the teacher finds at any time, while conducting an oral exercise in spelling, that a portion of his class are becoming listless, he can easily recall their attention by the following simple measure: The whole class pronounces distinctly the word given by the teacher, as *notation*; then one scholar says *n*; the next *o*; the next pronounces the syllable *no*; the next says *t*; the next *a*; the next *ta*; the next *nota*; the next *t*; the next *i*; the next *o*; the next *n*; the next *tion*; then the whole class pronounce the word *notation*.

Another useful method is to read a sentence of reasonable length, and require the members of a class to spell the words in order; the first scholar spelling the first word, the next scholar the second, and so on to the end.

Pupils may be allowed to select words for each other's spelling, confining them to the last lesson in geography, arith-

metic, history, or grammar. The first in the class pronounces a word for the second to spell, and the second for the third, and so on, the last pronouncing a word for the first. The scholar who fails to pronounce his word properly, or to spell correctly the word given him, should take his seat at once, and the one standing longest on the floor be declared the victor.

No exercise can be more frequently varied than this with profit to the pupil.

In all written exercises the spelling should be carefully scrutinized, and the misspelled words given to the pupil or the class at the next exercise, and it is better that the misspelled word be re-written correctly, and in such a position that the false and true spelling may be seen at a glance.

By arrangement of our present speller, teachers will connect the exercises from the speller with the oral course. The selection of sections is made with reference to this arrangement.

§ 11. COMPOSITION WRITING.

There is no school exercise so generally disliked as that of composition writing, and yet none may be made more attractive, and certainly none is more valuable. These are some of the first steps to be taken :

1. There should be no set time for the exercise, recurring, as is usually the case, once in two or three weeks; but, instead, brief and frequent exercises should be required at less intervals.

2. The subjects should always be those about which the pupil has been studying, or upon which oral instruction has been given. If, for any reason, the teacher desires compositions upon some particular topic, that topic should be made the subject of a lesson or many lessons, as its importance may demand. Leading questions may then be addressed to the child, and his answers will be his composition for the time. Special commendation should be given for any additional facts or arguments not called for by the teacher.

3. All errors that occur in the use of words in spelling, use of capitals, punctuation, or division into paragraphs, should be

carefully marked in the margin by the teacher by the use of "W" for an error in the use of a word — "S" for errors in spelling — "C" in use of capitals, or in the improper use of small letters — "P" for punctuation — "¶" for improper divisions into paragraphs — "O" for any omission of word, or pause, or letter. The proper abbreviation should be placed upon the line in which the error occurs, and the particular spot may be indicated by a dash or not as the age and advancement of the pupil may seem to demand.

4. The pupils should be called upon to read these exercises, and then written criticisms may or may not be called for, according to the advancement of the writer. In all cases, however, the second exercise should be a re-writing of the first, with corrections, enlargement, or, what I think still better, *condensation*. Let special praise be awarded the child who has properly expressed the most thoughts in the fewest words.

The second writing should be presented to the teacher with the original, that he may determine more readily whether or not the needed corrections have been made.

5. Time will be required for the successful carrying out of this work, but it need not be *extra* time, for it may, in most cases, take the place of written abstracts and reviews, at least in the Grammar Department.

§ 12. DECLAMATIONS AND RECITATIONS.

These may be encouraged in all the grades, but they are required only in the Grammar Grades. The following suggestions may be of service in the latter grades: Let the exercise be commenced as a Reading exercise, the pupil standing upon the rostrum; by degrees familiarizing himself with his selection, he may have but little occasion to look at his book, and finally may discard it altogether. One or more pupils previously designated may be called on each day, either at a time set apart for such an exercise, or, as seems to me better, during the Reading exercise. Exercises of special merit may be repeated upon public occasions. The expectation of such a call may serve as a spur to careful preparation.

§ 13. MENTAL ARITHMETIC.

Accuraey in analysis, and facility in computation, are the things to be aimed at in this study. The mind of the pupil must be trained to act without the aid of paper, slate, or pencil. No book should be allowed in the hands of the pupil during recitation. In all grades, where a text-book on this subject is used, teachers should make up many exercises similar in principle to those of the book, so that principles may be thoroughly understood. The use of prescribed formulas at all times is not desirable. It cripples independent action and thought. After an example is wrought according to formula, pupils should be encouraged to present other methods of solution, and should be commended for any correct solution, especially if it be brief and intelligible.

The answer should, in all mental exercises, be given first, and then the solution may, or may not, be given, as the teacher may prefer—*provided*, the teacher is sure that the pupil understands the correct method of solution. A solution may with profit be given by several members of a class, each person called upon taking the solution exactly where it was left by his predecessor, without omission or repetition of a word. This practice secures facility, attention, and accuracy. For the purpose of securing solutions according to a prescribed formula, concert exercises may be made very profitable. Great pains should be taken to secure brevity and accuracy in language, in methods, and in results.

Classes in arithmetic should have frequent extemporaneous exercises in combining series of numbers, involving the principles which they have gone over. These numbers should be given by the teacher, slowly at first, and afterward with more and more rapidity, as the pupils are able to carry forward the computation. The following is an example: Take 5, add 3, add 10, subtract 9, multiply by 8, add 20, add 8, subtract 40, divide by 10—result? Those who are prepared to answer raise the hand, and the teacher calls on one or more of them individually for the answer, or on all together. Exercises of this kind should be commenced as soon as pupils are able to

add simple numbers together, and continued through the entire course. Similar examples may occasionally be carried rapidly around the class, each pupil giving in turn the result for one step of the process, with as little delay as possible.

In all exercises of this kind there is danger that but few will derive benefit from them, unless the teacher is specially watchful, and calls out often those who do not give evidence in their countenances of mental activity. In all cases it is well to get answers from a large number of the class before telling which are right. This course may be pursued — An exercise is given; hands are raised; some one called on gives the result, and all who agree with the result given drop their hands. One of the disagreeing ones gives a result, and those who agree drop their hands; and so on, till all hands are down. The teacher then announces the correct answer, or if it be not a lengthy exercise, calls upon some one to repeat it, giving results at each step, that those who failed may see the cause of their failure.

§ 14. WRITTEN ARITHMETIC.

The principles involved in this study are of necessity the same as those acquired in *Mental Arithmetic*. The two studies should be combined in all the higher grades. It is well to require of pupils an analysis of every question presented for solution before the work is placed upon slate or black-board. Many examples given in *Written Arithmetic* can be readily solved without the aid of slate and pencil, and it is a waste of time to make of them any other than mental exercises, except so far as the writing out in full what is clearly comprehended, may serve as a model for the solution of more difficult problems involving the same principles. In such cases one model will generally suffice.

The minds of pupils are often confused as they pass from simple to compound numbers — from integral to fractional numbers, under the supposition that they are entering entirely new fields of study. The principles underlying them are the same, and if principles, rather than rules, be taught, difficulties vanish. More specific directions will be given under the several grades.

§ 15. WRITING.

Writing should be taught as a simultaneous class exercise, all the members of the class attending to the same thing at the same time.

In conducting exercises in writing, teachers should make constant use of the black-board. Important letters and principles of the copy should be written on the board, both correctly and incorrectly, illustrating the excellencies to be attained and the errors to be avoided. Teachers who are not accustomed to this mode of illustrating will find that they can easily qualify themselves to introduce it.

Many teachers who excel in imparting a knowledge of other branches, teach penmanship only indifferently well. Teachers who have little taste for this exercise should discipline themselves to increased effort. Even a poor writer may make a good teacher of penmanship; and no one who attempts to teach writing is excusable for not teaching it successfully.

Exercises of special excellence should receive marks of special credit; and deficiencies resulting from carelessness or indifference, should in all cases receive marks of error and affect the scholarship averages as much as failures in any other lessons.

Occasionally, in the higher grades, it may be well to place a copy on the black-board, and require each pupil of the division to hand to the teacher, after so many minutes practice, what he considers the best imitation of the copy. For this purpose the pupil should write on slips of paper, the copy being written but once upon each slip, and then the slips being carefully compared, the one with which the pupil is best satisfied should be handed to the teacher for marking.

The practice of directing the movements of the class by counting is recommended. The pupils will thus write with greater care and precision while learning. Rapid writing must succeed slower movements if at all successful.

§ 16. DRAWING.

A system of drawing has been adopted for our schools. The directions accompanying the books will be strictly followed.

§ 17. SINGING.

Little need be said upon this subject, since all the exercises outside of the book used are under the direction of the teachers of vocal music. There is, however, one important caution to be observed. Children should not be left to sing while the teacher is engaged in other work. During the exercise the undivided attention of the teacher should be given to it. Besides the regular times for singing, a single verse sung with life, when a spirit of listlessness or of weariness seems to creep over the school, will do much to awaken and refresh the pupils. It is well to associate music with many of the physical exercises of the school.

All the pupils should give strict attention to the exercise, because nearly or quite all may learn to sing, and because the very few who may not learn to sing may be very much profited by the accompanying exercises — beating time and reading the music. Little profit will come from a singing exercise unless *spirited attention* be given to it.

§ 18. ORAL INSTRUCTION.

To each grade some topics are assigned for which no text-books are provided. These topics constitute what we have been pleased to call "The Oral Course." This course is not designed to be exhaustive, but rather to furnish a little recreation from the ordinary routine of book study, at the same time that it gives a simple outline of matters important to be known by all pupils, especially by such as will be unable to go further than the outline. Properly understood and pursued it will prove of great value, both by reason of the actual knowledge gained and more especially of the desire awakened for farther and more exhaustive study. The habits of observation it

demands, and the interest it engenders are of incalculable value to the student. The incidental advantage of leaving the pupil to the expression of his own thoughts and ideas is by no means to be despised. These benefits are proportioned to the general intelligence and tact of the teacher, and the reflex influence of "The Oral Course" upon the faithful teacher will appear in increased teaching power. New sources of illustration are opened, and the ability to employ them is largely augmented.

Nearly every recitation furnishes occasion for more or less incidental instruction, but the teacher who embraces every opportunity to switch off upon side issues may be sure that his time will be largely wasted. The thoughtful instructor will find some occasions that he will not dare neglect. These generally occur in the line of a well-arranged oral course prepared primarily to suit the natural order of development of the child's mind, and secondarily to fit the text-book studies. In both these particulars the course herewith presented will be found better than the one it displaces, and yet it is, doubtless, susceptible of improvement.

Very many of the topics in the Oral Course can be treated most successfully as Object Lessons. The presence of the object gives life to the study. But mere gossip about the object is of no avail. There must be *systematic* study. *First* : What do our senses tell us of the object presented as to color, form, taste, smell, etc. *Second* : What can we recall of the object when no longer seen, heard, tasted, smelled or felt. *Third* : What are its points of resemblance or of contrast when compared with other objects with which we are familiar. *Fourth* : To which of the three kingdoms of nature does it belong, and what shall be its general classification. *Fifth* : What shall we infer as to its uses and its practical value. The present knowledge of the child will determine how much time shall be spent upon each of the above divisions, but their order may not safely be changed, nor should the attention of the child be diverted from any one until some definite knowledge is gained.

Teachers should make thorough preparation for these

exercises, and be sure that their instructions are simple, concise, and accurate. "They should never tell a child what he may be made to tell them, and should never give any information without calling for it again."

While a definite time should be assigned to this exercise, and, as a general rule, no deviation be allowed from the programme, still occasionally opportunities will arise when the object lesson may be made more impressive than at any other time, and advantage should be taken of such favorable opportunities, though it may call up objects out of their regular order.

Some of the facts of meteorology may be most vividly impressed upon the mind during the passage of a severe storm. The parade of a menagerie may furnish excellent opportunities for lessons upon the camel or elephant; the tact of the successful teacher will turn many such occasions to good account.

That instruction of the character sketched above may not be entirely neglected, the topics assigned to each grade should be made a part of the examination for promotion from grade to grade, and at least of equal value with any other portion of the work of the grade. In estimating results of this examination the expression of the pupil's own observations and thoughts upon the several topics should be counted as of more worth than any repeated words of others which he may have been required to commit to memory. In other words, the examiner should seek to learn how much the pupil has thought, rather than how much he has absorbed.

§ 19. ABSTRACTS AND REVIEWS.

Each lesson should be made, to some extent, a review of the previous lesson, without, however, consuming very much time, except in cases in which the previous recitation has been unsatisfactory. Pupils should understand that they are liable to be called on to recite any portion of the previous lesson, and questions enough should be asked in review to make it necessary for them to read over the last lesson before coming

to the recitation, unless their previous preparation has been sufficient to fasten it on the memory.

The oral lessons should, in most cases, be reviewed more than once, and in all cases, till they are thoroughly learned and remembered.

In most of the studies one lesson each week should be a review of the four preceding lessons.

In the primary divisions, the reviews will necessarily be oral; but in the grammar divisions they should be both oral and written. In the 1st, 2nd, and 3rd grades, most of the classes should have at least one written review in a month, beside the oral reviews.

It may be well, occasionally, to devote an hour to a written review of all the different branches, in one exercise, selecting ten or more questions promiscuously from all the studies of the class.

In the six upper grades, all the classes should have occasional exercises in writing a few lines of prose or verse, dictated orally by the teacher, as a test of their proficiency in spelling, punctuation, use of capitals, penmanship, etc. In the 5th and 6th grades, the pupils may use either pen or pencil, at the discretion of the teacher; but in the 1st, 2nd, 3rd and 4th grades they should be required in all cases to use a pen. These exercises should be strictly extemporaneous, and every paper should be passed to the desk at the close of a specified time.

One of the best methods of conducting written reviews, is to write several topics distinctly on the blackboard, and require the pupils to expand them as fully and accurately as possible. Each pupil should be seated by himself, if practicable, and furnished with pen and paper; but he should receive no assistance, direct or indirect, from either teacher or text book. Great care should be taken to remove from the pupils, as far as possible, all temptation to seek assistance from books, or papers, or class-mates. When two pupils of a class are seated at the same desk, it is often desirable to have two sets of questions of about equal difficulty — one set for all the pupils sitting at one end of the desks, and one for those sitting at the other end.

Written reviews are among the most successful means that can be employed for securing thoroughness and accuracy of scholarship. They afford a reliable test of the pupil's knowledge of the subject, cultivate habits of freedom and accuracy in the use of language, and afford a valuable discipline to the mind, by throwing the pupil entirely upon his own resources.

In addition to the written reviews, teachers of the higher divisions should require frequent written exercises in connection with the daily recitations in history, grammar, arithmetic, etc.

All written reviews and abstracts should pass under the critical examination of the teacher; the important errors should be corrected; and pupils presenting papers carelessly written, should be required to re-write them.

§ 20. PROMOTIONS FROM GRADE TO GRADE.

The subjects of study embraced in the course are fixed by the Board of Education, and promotions from grade to grade must depend upon the mastery of these subjects. None should be omitted, and the test examination should be equally thorough upon all.

As a general rule the capacity of the several pupils of a class will be found of the same grade, so that they will be best advanced by being kept together, and yet individual instances will present themselves upon which the Principal of the school must exercise his discretion and the best interests of the pupil will control his action. No pupil should be kept back simply because the teacher desires to retain him in his class, and none pushed forward simply because the teacher desires to get rid of him.

In all cases the good of the pupil or of the class will control the Principal in determining the time of examination for promotion.

An average attainment of from 90 to 70 per cent. of correct answers (graded from 90 for the lowest grade to 70 for the highest) upon all the studies of the grade, may serve as good ground for promotion. An entire failure in Reading, Writing or Arithmetic should be a bar to a pupil's progress from grade

to grade, unless something beyond the pupil's control occasion the failure.

The ambition of very worthy teachers sometimes leads to crowding classes through a particular grade. Such a course, if carried beyond the natural development and growth of the child's mind, works injury in the end, and his course in other grades must suffer a check.

No classes should be hurried through a grade nor should any be delayed beyond a reasonable time in a grade, because a general examination is either feared or desired.

In the Grammar Department, the time of a school year is not too long for completion of the work of a grade, and as a general rule it is long enough.

In the Primary Department, from six months to a school year will serve as about the proper time for completion of the work of each of the several grades.

Questions for examination should not be confined to the text of the book studied. The majority of the questions may be taken from the text-book and part should be put in such a manner as to test the pupil's general knowledge of the subject upon which he is examined.

In each list of questions one or two may with propriety be presented upon such parts of previous grade work, as are closely connected with the grade work of the class.

SPECIFIC DIRECTIONS ACCOMPANYING THE SEVERAL GRADES.

TENTH GRADE.

OUTLINE.

Language and Vocal Culture.—Reading from cards and from blackboard, one hundred words, both printed and script. Special attention to tones in reading, spelling and reciting. *Music.*—Reading and rote songs. *Spelling.*—Words learned orally.

Numbers.—Counting, reading and writing numbers to 100.

Writing and Drawing.—Each child to write his own name and the words learned from cards and blackboards. Drawing simple forms directed by the teacher.

Miscellaneous.—*Morals and Manners*, as occasions may suggest or necessity require. *Physical Exercises*, frequent, varied and brief. Human body and its parts. Five senses, their organs and use. Common Objects with more observable properties.

No text-books required. Just before promotion to the Ninth Grade, pupils may have the First Reader put into their hands until they become familiar with the method of holding, finding and keeping the place while reading. The place to be found by pages and not by lessons.

PROGRAMME.

Four Classes—Sixteen Class Exercises—Eight General Exercises..

§ 21. LANGUAGE AND VOCAL CULTURE.

Reading.—If any single method of teaching this branch must be pursued to the exclusion of all others, it should be the word-method. But no such necessity exists, nor would such a course be at all desirable or profitable. Prominence should be given to the word-method. The cards furnish words, and the child should be made so familiar with them that he can call them at sight, without the necessity of allowing him time to examine the component parts of the word. He should learn the names of words as he learns his schoolmates, from their general form and peculiarities. That he may distinguish

John from Harry, he does not necessarily notice each feature of each boy, but the *general* impression made upon his mind enables him to distinguish the one from the other. When close resemblances exist, it is necessary that his attention be called to some one distinguishing feature. Were the pupil called upon only to learn words that are quite or entirely dissimilar to each other, no other than the word-method would be needed, but to every word he learns to-day he will find ere long some other word quite similar in form. He should, therefore, be taught the separate features of each word, that where he finds one generally similar he may be able to fasten upon some point of difference that may serve as his guide in naming his acquaintances.

Hence, the word-method should be followed or accompanied by the analytic and synthetic, or spelling method. In using the cards a large number of exercises may be introduced besides those found thereon. The words may be combined into an almost infinite variety of sentences. The teacher may give short and simple sentences, containing words found upon the cards, and require the pupils in turn to find the words upon the cards, or she may require some one pupil to point out the words while the class reads the sentence after his pointing. Sentences may be printed upon the board and the pupils be required to find the words upon the cards. The practice of framing words into sentences is of great importance, so that the child may attach some ideas to words read, and thus avoid tones so common to those who repeat mere words without ideas.

It is well to keep a list of words printed upon the board, to which may be added some new word each day.

In introducing the words from the primer, the pupils should not have the book, but should learn the words as printed by the teacher. These words should be framed into sentences unlike those found in the primer, so that when the ninth grade is reached and the pupil takes the primer into his hands, he will meet familiar words, but in new relations, and from the same words with which he has become acquainted he will gain new ideas. The oral exercises should be made subservient

to this reading exercise. The child should be taught the names of objects about which he is learning, unless they be too difficult, so that he may recognize the word-picture of the object as he recognizes any other picture. Nearly all monosyllabic names of common objects he may learn in connection with his object lessons, without much extra effort on the part of the teacher. Indeed, each reading lesson should be made, in part, at least, an object lesson.

No exercise in reading or in any other branch of this grade should be continued when the class shows signs of weariness, or of uncontrollable inattention. See § 9.

Spelling.—Spelling by letters may properly be extended to all words learned, but spelling by sounds should be confined at first to such words as contain only the simplest elemental sounds.

Let the teacher take special pains to secure accurate and distinct articulation of the vowel sounds heard in the syllables attached to the notes of the scale, as *do, re, mi, fa, sol, la, si, do*, long *o*, long *a*, long *e*, and Italian *a*. Connected with these vocal exercises should be associated exercises in breathing—such as silent and prolonged inhalation and exhalation, silent and rapid breathing, quick and full inhalation followed by prolonged and silent exhalation, prolonged and silent inhalation, followed by rapid exhalation; rapid inhalation with explosive exhalation. All these exercises in breathing should be very short.

Vocal exercises may also be combined with physical exercises, especially in the utterance of the vowel sounds, each being connected with some movement of hands or feet.

The exercises may be varied also as to time, pitch, and volume. Sounds may be prolonged or shortened, may be made high or low, may be given in a whisper or with full tone.

Music.—This branch is under the direction of the Teacher of Music.

§ 22. NUMBERS.

In this exercise, at first, pebbles, beans, or better still, small blocks an inch square should be used. Children may also

make marks upon their slates, and count them, or they may be required to make a certain number of marks not exceeding one hundred. In counting they should be required to commence at any point and count either forward or backward. They should be able to call at sight, and to write the Arabic numbers as far as one hundred.

This practice may be extended to counting scholars in the room, in the class, or upon the play-ground, to counting the panes of glass in the windows, or any other objects on or about the school premises.

§ 23. WRITING AND DRAWING.

Writing.—The children of this grade may be taught the use of the pencil in making small letters in script form. They should be taught how to hold the pencil in forming such letters. The exercise should be a simultaneous exercise, and should be conducted by the teacher carefully and systematically.

It is well for the teacher to write each child's name upon his slate in permanent form by the use of an iron pencil, or with ink upon the slate frame, that the child may have a permanent copy to imitate in the writing of his name. With the single exception of the initials of the child's name, no capital letters will be written in this grade.

Drawing.—It is designed that the simplest forms shall be used in the drawing exercise. Straight lines, triangles of different kinds, the square, and the rectangle. The names need not be given, the object being skill in the use of the pencil. The teacher should sketch objects of different kinds, embracing the figures given above, and draw upon the board, giving the pupils opportunity to follow line by line. After the first attempt with the model before them upon the board, they should be encouraged to make many copies. Occasionally they may be allowed to put their various forms together to suit their own tastes.

§ 24. MISCELLANEOUS.

Common Objects.—Since the tenth grade should be regarded as a bridge from the freedom of home life to the more regular discipline of the school room, the first lessons should be simple, conversational exercises upon home objects, with which the children are already familiar, and in which they feel the greatest interest; their toys, their pets, their plays, their friends, etc., etc. They should be encouraged to give the teacher all the knowledge they possess, and should be stimulated to learn by careful observation more than they already know. Habits of observation and of accuracy in the use of language are of the first importance. Pupils should be encouraged to bring to the teacher objects for examination, so far as it may be done conveniently and with propriety. There need be no limit as to the character of these familiar objects. All observable properties should be noted without any very rigid attempt at classification. Short and pertinent anecdotes may enforce the lesson which should always cease the moment the interest of the class flags. If the child in this grade can be induced to pass along with all his senses in active exercise, very much good will be accomplished. As to size, color and parts of these common objects, the aim should be to secure the child's own ideas and to correct such as are erroneous, in all cases avoiding the use of difficult words, and making the instruction as simple and as comprehensive as possible.

The Five Senses.—As the child comes in contact with objects in his daily life, he will see, hear, smell, touch or taste them. Upon some objects a single sense may be employed; upon others, several or even all. It is important at the outset that he learn something about the organs of seeing, hearing, smelling, feeling, and tasting, and their proper uses. Much may be said of the blind, and the acuteness of their other senses, and so of the deaf, and of the reasons why persons born deaf do not learn to speak. The proper care of each of the organs should be enforced. The duty of sympathy for the unfortunate should be impressed upon the minds of all. The methods of instruction of the blind and of the deaf mutes will

interest and profit those who have not already some knowledge of them. The comparison of these methods with theirs, and the occasion those in full possession of their senses have for gratitude, will serve as the basis of important lessons.

The Human Body.—This topic should embrace only the more general divisions of the body, as, the head and its parts, skull, face, ears, eyes, nose, mouth, chin, and their relative position and uses; body, chest, neck, throat, lungs, heart, stomach; limbs, arms, legs, elbows, wrists, hands, fingers, knees, ankles, feet, toes. Something may be said about the bones and the flesh, but only such things as a child may comprehend. See § 18.

MORALS AND MANNERS. See § 4.

PHYSICAL EXERCISES. See § 3.

NINTH GRADE.

OUTLINE.

Language and Vocal Culture.—Reading from the First Reader, also fifty new words found in the Second Reader, both printed and script. Meaning and use of period, interrogation mark and hyphen. Distinction between an assertion and a question, with proper inflections at the close of each. *Spelling* by sound monosyllabic words without silent letters; spelling words read (orally). *Music.*—reading and rote singing.

Numbers.—Reading and writing numbers to 1,000. Addition and subtraction tables to 5's. Adding columns of single figures, sum not exceeding 15, or any two numbers of not more than three figures, such that the sum of no two figures of the same order shall exceed 9. Rapid combinations in adding and subtracting in no case exceeding 15. Roman numerals to L.

Writing and Drawing.—Writing words from Reading lessons, small letters. Drawing simple forms directed by the teacher.

Miscellaneous.—Morals and manners as in the Tenth Grade. Physical exercise as in the Tenth Grade. Domestic animals. Primary colors. Three kingdoms of nature.

No text-book required except the First Reader.

PROGRAMME.

Four Classes — Fourteen Class Exercises — Eight General Exercises.

§ 25. LANGUAGE AND VOCAL CULTURE.

Reading and Spelling.—In this grade pupils are introduced to the use of a book. Much care should be taken to teach the child how to hold his book and to turn the leaves properly. The book should always be held in the left hand, having the thumb and little finger upon the face of the book when opened, and the other fingers upon the back. The index finger of the right hand may then be used to aid the child in keeping his place, or to turn the leaf when needed.

The pupils should be able to point out and explain the *title-page*, *table of contents*, *leaves*, *pages*, *margins*, *frontispiece*, and the *headings* or the *titles* of the lessons.

While the pupil reads the first part of the reader, it is well that a portion of each exercise be devoted to teaching the new words that will be found in the last part of the book and extending the exercise as the pupil advances, even to the new words found in the first part of the second reader. In doing this, care should be taken to construct sentences unlike those found in the book. The words and sentences should be taught from the board, unless the words are found upon the card used.

In preparing an exercise in spelling, it is highly important that young pupils should hear the words pronounced by the teacher. A very useful method is, for the teacher first to pronounce all the words of the lesson distinctly, while the pupils listen attentively and point to the words in the books, as they are pronounced. Next, the teacher pronounces one word, which is repeated by the first scholar in the class; then another word, which is repeated by the second scholar, and so on. After this, if time permits, the teacher and class may pronounce in concert, and then the class pronounce in concert without the teacher.

All the spelling lessons should be neatly written or printed by the pupils on their slates, and the class should be required to read the words from their slates in connection with the spelling exercises. See also §§ 9, 10, 21.

All spelling by sound should be most carefully attended to,

and each sound of the word spelled should be given with promptness and precision. Too much stress can not be laid upon the importance of distinct articulation. The lazy and slovenly habit sometimes formed of sliding all the sounds together can not be too strongly condemned. Each sound must be clearly and sharply defined, or the exercise is a positive injury to the pupil. If teachers will observe carefully the position of the organs in the utterance of each sound, the defective utterance of his pupils may be very readily cured.

Music.—The teacher will follow the instruction of the Music Teacher.

§ 26. NUMBERS.

Arabic Notation.—The conversion of words into figures or of figures into words will be found useful exercises, also requiring the pupil to write and to read as many numbers as he can form from a given number of digits, for example: Give 3, 5, and 1. *Result*, 1, 3, 5, 13, 15, 31, 51, 35, 53, 135, 153, 315, 351, 513, 531. In examples like this no number written should exceed 1000. The exercise may be varied by permitting the pupil to repeat any one of the figures or all of them, if he prefers, thus, 111, 113, 115, 331, 333, etc., etc.

Roman Notation.—After the child has learned the letters representing certain numbers as far as 50, a good review exercise is found in placing upon the board a certain letter, and requiring the pupil to give as many numbers in Roman characters as will require the use of that letter. Given V. *Result*, V, XV, XVI, XVII, XVIII, XXV etc., with the Arabic Notation for each.

Addition and Subtraction.—The children should be taught to construct their own addition tables by the use of the slate and pencil, and a great variety of exercises may be introduced that shall give them facility in adding and subtracting as far as the grade extends. As indicating some of the exercises that may be given, the following may serve, it being understood that the blank space is to be filled by the child:

$1 + 2 =$	$5 - 3 =$	$1 + 1 + 2 + 3 =$
$2 + 3 =$	$10 - 2 =$	$2 + 1 + 1 = 6$
$3 + = 7$	$14 - 4 =$	$1 + 1 + 1 + = 11$
$+ 9 = 12$	$- 3 = 8$	$4 + 1 + 1 + 3 =$

These exercises may be extended with profit, if the teacher is careful that the sum of the numbers given shall not exceed $5 + 10$ or 15 .

All counting of fingers should be forbidden, and all other artificial helps discouraged, as soon as it is possible for the pupil to work mentally.

WRITING.

DRAWING.

§ 27. MISCELLANEOUS.

Domestic Animals.—The cat, the dog, the horse, the cow, the sheep, the hog, the hen, the duck, the goose, the turkey, etc., may serve as illustrations. Their general structure, their relative size, and their clothing or covering may be considered. The head, eyes, ears, nose, and feet of each should be quite fully discussed. The varieties of tone in their utterances; their modes of defence when attacked; their methods in lying down and in rising, or their positions while resting, and their varied movements in walking, running, flying, etc., their kinds of food, and their teeth (where any are observable), should be made prominent topics of conversation. Anecdotes showing their intelligence, sagacity and cunning, should be drawn from the children, or given to them to be called for again. Instances of affection for one another or for man, and of treachery, will be found interesting and profitable.

Primary Colors.—These are red, blue and yellow. Pieces of paper or of cloth having any one of these colors may be constantly before the child as book-marks. Flowers may be compared with some one, or all, of these patterns and their colors approximately determined. Nothing should be said of other colors, until these are made familiar to the child. The

following distinctions may be properly observed: light red, red, and dark red; light blue, blue, and dark blue; light yellow, yellow, and dark yellow. All objects that have any one of these colors may be talked about with reference to their color, and may be compared with other objects similar in color.

Classification of Natural Productions.—Many objects may have been discussed in the presence of the tenth grade classes that will come properly before them in the remaining grades of the Primary Department, but thus far there has been no attempt at classification. The object has been to awaken curiosity in any direction pleasing to the child. With this grade commences a system to be followed through succeeding grades. The classification of all objects under three general heads—animal, vegetable, and mineral—according to the three great kingdoms of nature. It will be sufficient for the purposes of classification to give the following definitions. Animals are living beings, having the powers of seeing, hearing, smelling, feeling and tasting, and also having the power of voluntary motion. Vegetables are living things, but do not have the powers of sensation or of voluntary motion. All other objects are minerals. These distinctions are correct, though the limits between animals and vegetables, and between vegetables and minerals are not easily determined, so that in a very few instances, not often brought to the notice of children, it is difficult to place objects in their proper class. The course to be pursued may be briefly sketched thus. An object is presented. The following series of questions may be asked: Has it life? Can it move of itself? Can it see? Can it hear? Can it smell? Can it feel? Can it taste? If all these questions can be answered in the affirmative there is no doubt that it is an animal. If all must be answered in the negative, it must be a mineral. If the first question can be answered by *yes*, and all the others must be answered by *no*, then it is a vegetable. This exhaustive process may be carried out in full or in part, in all cases, until the child classifies readily. Difficulties will arise when dead animals are presented, and especially when ripened and perfected fruits and esculent vegetables are considered, but in such cases the difficulty may

be solved, if instead of asking the questions propounded above, the form be varied so as to read: Has it ever had life? Has it ever seen? etc., etc. Has it ever had the power of voluntary motion? Let the questions be asked either in the one form or the other whenever a new object is presented, and there will be little danger of improper classifications.

Animal productions may also be discussed. Such things as have at any time formed part of any animal, are animal productions, as feathers, hair, bristles, etc., etc.; hides, skins, furs, leather, etc., etc.; bone, ivory, horn, shells, etc., etc. In the same manner vegetable and mineral productions may be discussed. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

EIGHTH GRADE.

OUTLINE.

Language and Vocal Culture.—Second Reader. Comma, semicolon and colon without rules. Exclamation point and its use. Use of capital letters at the commencement of sentences, and of names of persons, and the words I and O. *Spelling* by sound any monosyllabic words. Spelling words read (orally). *Music.* Reading and rote singing.

Numbers.—Reading and writing numbers to 10,000. Addition and subtraction tables completed. Adding numbers, sum not to exceed 10,000. Subtracting numbers of four figures or less, of such character that each figure of the minuend shall equal or exceed the corresponding figure of the subtrahend. Multiplication and division tables to 5's. Roman numerals to C. Rapid combinations in addition, subtraction, multiplication and division, not exceeding 50.

Writing and Drawing.—Writing, small letters and capitals, words from Reading Lessons. Drawing.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Divisions of Time and their names, with proper abbreviations. Secondary Colors. Wild animals.

PROGRAMME.

Three or Four Classes — Twelve Class Exercises — Six or Eight General Exercises.

§ 28. LANGUAGE AND VOCAL CULTURE.

Reading and Spelling.—The directions given under the Ninth Grade are so applicable here that they need not be repeated. §§ 9, 10, 25.

Punctuation Marks.—The names and uses of the marks given in the outline, are all that is required in this grade. The teacher may dictate sentences that require the use of pauses learned in this and in the previous grade, and thus give the pupils practice in their use by requiring them to punctuate properly the sentences given. These sentences should contain no words not familiar to the pupil, so that full attention may be given to punctuation.

Use of Capitals.—This may be taught in connection with the written exercises, which may be copied from the reader or from dictation by the teacher.

Music.—As in other grades, under direction of the Music Teacher.

§ 29. NUMBERS.

Arabic and Roman Notation.—As in previous grade, with extension to suit the outline.

Multiplication and Division Tables.—As practical exercises in review of these tables, examples like the following may be given the pupil to work upon while the teacher is employed with other pupils.

$4 \times 8 =$	$16 \div 4 =$	$4 \times 3 \div 2 =$
$3 \times = 18$	$\div 3 = 5$	$5 \times 4 \div = 10$
$\times 6 = 12$	$12 \div = 3$	$\times 3 \div 5 = 6$

The blank space is to be filled by the child. An exercise a little in advance of the above may be given as follows :

What numbers multiplied together will produce 12, 15, 18, 24, 42, or $\times = 16$. $\times = 30$. $\times = 25$.

Care being taken not to go beyond the table of 5's, or not to exceed the product 50.

Addition and Subtraction of Written Numbers.—The examples given children should be exceedingly simple at first,

and care should be taken that they do their work properly and within the limit established by the outline. As the work of written addition commences here really. (since in previous grades, nothing is allowed that involves what is usually called "carrying for tens," or reducing to higher denominations) pains must be taken to cultivate a right habit of adding. To illustrate. Given a column of figures :

say,	6	<i>Improper.</i> —Eight and one are nine, nine
	4	and five are fourteen, fourteen and three
	3	are seventeen, etc.
	5	<i>Proper.</i> —Eight, nine, fourteen, seventeen
	1	etc., the pupil giving only results at each
	8	step, thus securing attention and facility.
	—	
	25	<i>Proper.</i> —Seven, thirteen, twenty-one,
	34	twenty-five, thirty=three tens, and no units.
	18	Then three, five, six, seven, ten, twelve=
	16	one hundred, and two tens.
	27	
	<hr/>	
	120	

Combinations.—The teacher must aim to secure attention and ready thought.

WRITING.

DRAWING.

§ 30. MISCELLANEOUS.

Divisions of Time.—This should include the year; the months and their names; the days, and the names of the days of the week; the seasons, their names, and the names of the months in each season. The pupil may also learn something of the method by which the time is determined by the clock.

Secondary Colors.—These are violet, indigo, green, and orange. The first two are composed of red and blue; the third of yellow and blue, and the last of red and yellow. Any piece of glass that will give the solar spectrum may be brought into the school room, and the child may point out the various colors, both primary and secondary; pieces of cloth

or of paper may also be used as standards to which objects may be applied when the color is to be tested. These standards should be of a decided color. But little time should be spent in this grade upon the color of objects, unless it approximates quite near to some one of the seven colors already given.

The teacher will find great help in fixing the composition of secondary colors in the mind of the child if she will place upon the board with colored crayons some diagram of colors. I know of no better form than to arrange the colors of the solar spectrum in a circle, placing the secondary colors between the primaries that compose them; *orange* between red and yellow; *green* between blue and yellow; and *violet* and *indigo* between red and blue (the violet being next the red and indigo next the blue.)

Wild Animals.—Much that was said under the head of domestic animals in the ninth grade is applicable here. A few only of the more common field animals should be treated of, and generally such as children have some opportunity of seeing. The elephant, the camel, the deer, the bear, the tiger, the fox, the rabbit, the eagle, the owl, the pigeon, the whale, the trout, the caterpillar, the bee, the house-fly, and the mosquito may be sufficient examples.

Only their most observable properties are to be treated of. It must be remembered that children of this grade need simple language, and not the scientific terms of the books. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

SEVENTH GRADE.

OUTLINE.

Language and Vocal Culture.—First half of Third Reader. Quotation marks, and their use. Use of capitals in all proper names the pupils have occasion to write. Construction of simple sentences requiring the use of the period and interrogation point. *Spelling* by sound words in reading lesson, except the most difficult. Spelling, with use of the Speller. Abbreviation of words that are usually abbreviated. *Music*—Reading and rote singing.

Numbers.—Reading and writing numbers to 100,000. Multiplication and division tables completed. Addition and subtraction of numbers, sum or minuend not to exceed five figures. Multiplication of any number, not exceeding four figures, by any single figure. Division of any number, each figure of which is an exact multiple of the divisor. Roman numerals to M. Rapid combination in addition, subtraction, multiplication and division, not exceeding 100. Primary arithmetic.

Writing and Drawing.—Writing words in reading and other lessons. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Lines and angles. Trades, tools and materials. Wild animals.

PROGRAMME.

Three Classes — Twelve Class Exercises — Six General Exercises.

§ 31. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

Spelling.—In this grade the child is introduced to the use of the spelling book. When the lesson is assigned, the teacher should carefully pronounce each word of the lesson and require the class to repeat it in concert, having their attention fixed upon the word, so that when the word is studied by the class at their seats, no incorrect or imperfect pronunciation shall make trouble when the recitation comes. See § 10.

Music.—Instruction given by Music Teachers.

Construction of Sentences.—In this exercise the pupil may be required to ask a question bearing upon his lessons and then to answer it, or he may express in his own language what he has learned about some object embraced within "The Oral

Course." At any rate let the exercise have some other end in view than the mere writing of the sentences.

Punctuation Marks.—The teacher may dictate exercises requiring the pupil to punctuate them properly, or the pupil may be required to correct an exercise written upon the board without capitals or punctuation.

Abbreviations.—Whenever a word is spelled that is usually abbreviated, its proper abbreviation shall be taught, or required if already learned at the time of spelling. No extra time need be given to abbreviations.

§ 32. NUMBERS.

Arabic Notation and Roman Notation.—See instruction of previous grade, and extend to suit outline.

Multiplication and Division Tables.—Extend instructions of previous grades.

Addition and Subtraction.—The only new feature introduced is that usually called "borrowing" in subtraction. The principle that includes this process can be easily explained to a child in many ways. He has a ten cent piece and five cents in his pocket. He buys a pencil for seven cents. It is evident that he can not pay for it out of his five cents, and he must "break" his ten cent piece—having three cents of that left, which, with his five cents, makes to him a remainder of eight cents. These concrete illustrations may be given, and then the abstract be used. Seven ones can not be subtracted from five ones, but it may be subtracted from one ten or ten ones, leaving three ones, which, with the five ones he had before makes eight ones as his remainder.

Multiplication and Division of Written Numbers.—Multiplication should be considered as a short method of adding and should be illustrated by its corresponding example in addition:

$$\begin{array}{r} 1354 \\ \quad 4 \\ \hline 5416 \end{array} \quad = \quad \begin{array}{r} 1354 \\ 1354 \\ 1354 \\ 1354 \\ \hline 5416 \end{array}$$

The principle of "carrying" is precisely the same as in addition—and for a time it may be well to require the child to prove his multiplication by addition.

Primary Arithmetic.—This book is introduced as a text-book first into this grade. The pupil may study it, but he should not have it in recitation. The recitation should be purely mental. Occasionally it may be well for the teacher to place some pupil before the class who shall read the example to be solved, that her whole attention may be given to the solution. In every case the answer should be given first and then the solution required, except in cases in which the only method of solution possible is a mere useless repetition of words. Under this exception come such cases as the following: What is the product of 6 by 5? To attempt any solution of this question is waste of time. The same may be said of "How many times is 5 contained in 25?" The answer is 5, and that is all that can properly be required. A word as to solution of concrete examples may not be inappropriate. The order should be: First, the answer; second, the repetition of the question; third, the statement of the general principle underlying the solution, and lastly the solution. To illustrate: *Problem*: At three dollars a pair what will five pairs of shoes cost? *Answer*: Fifteen dollars. (Repetition of question.) *General principle*: Five pairs of shoes will cost five times as much as one pair. *Solution*: Since one pair of shoes costs three dollars, five pairs of shoes will cost five times three dollars or fifteen dollars. Therefore, etc. This whole process need not be repeated in every instance, especially when the pupils have become familiar with it. See § 13.

WRITING.

DRAWING.

§ 33. MISCELLANEOUS.

Lines and Angles.—This introduces the subject of Geometry. Great care must be taken to make definitions clear, concise and truthful. The meaning and application of the terms, *straight*, *curved*, *crooked*, *horizontal*, *vertical* and *oblique*, as applied to lines, should be impressed upon the

mind of the child by many illustrations, each of which he should be called upon to repeat or to present in some new form.

With reference to angles, the terms *acute*, *obtuse* and *right* must be employed, and with the right angle, the term *perpendicular* should be explained. While the terms vertical and perpendicular are in some respects synonymous, it will be better for the child that he be taught the term perpendicular only in connection with the right angle when two lines are used, for such is its proper use in Geometry. A vertical line can have but one direction, and that is toward the zenith. A perpendicular line may be either vertical, oblique or horizontal, provided only it form a right angle with some other line.

In connection with their Drawing, the children may have frequent applications of the terms used in connection with this part of their course.

Wild Animals.—Extending the instruction of the previous grade beyond the more observable properties, their peculiar structure, their resemblances to domestic animals, their habits of living, their weapons of warfare, the modes of capture, and their degrees of intelligence should be learned. Each teacher may extend this list as far as time and the interest of the class will admit. At each lesson some instructive anecdote should be given, and the same should be called for at the next recitation.

Trades, Tools and Materials.—In calling out the knowledge of the child upon this topic, such trades as are connected with the absolute necessities of life should be first considered; first, because the most important; and then because these afford the most abundant facilities for observation. Of such are the trades of the carpenter, the mason, the painter; the shoemaker, the tailor, the milliner; the blacksmith, the plumber, the tinworker; the farmer, the miller, the baker; the house-mover, the sewer-builder, the cistern-maker, etc., etc. The names and uses of the several tools employed by each tradesman, and the materials wrought upon, with the articles manufactured, should be called for. By way of review, take some

object, the school-room for example, and inquire how many tradesmen have had something to do in its construction, what tools and what materials they used. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

SIXTH GRADE.

OUTLINE.

Language and Vocal Culture.—Third Reader completed. *Spelling*—by sounds, any words read. Spelling oral and written, from Speller, with abbreviations of such words in spelling lessons as are usually abbreviated. Definitions of words. Construction of sentences comprising words from spelling lessons, with special attention to the use of capitals and punctuation as far as taught. *Music*—Reading.

Numbers.—Reading and writing numbers of two periods. Add, subtract, multiply and divide so that the sum, minuend, product or dividend shall not exceed two periods, multiplier two figures, divisor one figure. Rapid combinations. Primary arithmetic.

Writing and Drawing—Use of copy book, pen and ink in writing. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Articles eaten and worn. Plane figures, with review of lines and angles. Circle and its parts. Map of Chicago, with physical features of the American Continent, and use of terms defining divisions of land and water, with simple illustrations.

PROGRAMME.

Three Classes—Ten or Twelve Class Exercises—Six General Exercises.

§ 34. LANGUAGE AND VOCAL CULTURE.

Reading.—See previous grades and § 9.

Spelling.—See previous grades and § 10.

Abbreviations.—See Seventh Grade.

Construction of Sentences.—See Seventh Grade.

Music.—Instructions given by Music Teacher.

Definitions.—These should be given in language understood by the pupil. Unless the words given in defining be more

easily comprehended by the child than is the word defined, the time spent upon this work is worse than wasted. To test the pupil's knowledge of the meaning of words, he may be required to substitute for the words defined others that shall convey essentially the same idea. Occasionally, the exercise of reading some selected passage with as many words substituted as can be done without changing the meaning of the passage, is desirable. The passage selected for such an exercise should in all cases be within the easy comprehension of the pupil.

§ 35. NUMBERS.

Reading and Writing Numbers.—Instruction in previous grades extended to the limits of the outline.

Addition, Subtraction, Multiplication and Division of Written Numbers.—The only new principle introduced here is that involved in dividing numbers, each figure of which is not an exact multiple of the divisor. The principle, applied in part to subtraction, of reducing a unit of a higher order to units of the next lower order, in order to obtain a minuend large enough to answer the demands of the subtrahend is applicable here to its full extent. The remainder at each step of the process in division must be reduced to units of the next lower order that, with the units of that order already given, a new dividend may be formed, and thus no part of the number is really left undivided. The tact of the teacher will devise ready illustrations of the principle.

Primary Arithmetic.—See instructions under Seventh Grade, and § 13.

A very useful exercise in numbers that will employ pupils while the teacher is busy with other classes, is sketched below :

5	87	5	31,250
9	78	15	6,250
		45	

The process is to be continued which is indicated in each column, whether it be addition, subtraction, multiplication or division, and may be carried either to the lowest possible

figure on the one hand, or to the limit of numbers allowed the grade on the other. Such exercises employ children whose time can not be wholly devoted to study of books. The child must not be told by the teacher what to do with the examples, but he must determine for himself.

Combinations.—These exercises should be continued either as written or oral exercises, better both, as time may permit.

Writing.—The use of the pen is first required in this grade. The points to be attended to are, the kind of pen used, the manner of holding the same, the precautions to be taken against soiling the fingers and blotting the paper, and the cleaning of the pen after its use. Each pupil should have a small piece of paper, upon which to try the pen before writing, also a blotter to keep under the hand while writing so that the paper may not become oily by the frequent passing of the hand over it. To secure neatness and uniformity, the teacher should direct all the movements of the class in writing, requiring all to write the same words at the same time, and allowing no rambling writing. If a pupil is absent upon any day set for writing, his book will show a complete blank for that day. The teacher may or may not give him permission to make up his loss, as the circumstances attending his absence may warrant.

DRAWING.

§ 36. MISCELLANEOUS.

Plane Figures, the Circle and its Parts.—Extending this exercise from the seventh grade, the following figures should be described: equilateral, isosceles, scalene and right angled triangles; rectangles (the square and the oblong); the rhombus and the trapezium; the circle, circumference, arc, diameter, radius, chord, segment, sector, semi-circle and quadrant.

Articles Eaten and Worn.—The more common articles of food and of apparel are to be taken up. Children will need a map before them that they may find the places from which the articles are brought. Special pains should be taken to

distinguish *home* from *foreign products*. The methods of growth, and the preparation needed to fit articles of food for the table, and the process of manufacture of articles of wearing apparel; the different kinds of food and of clothing suited to warm and to cold climates; the kinds of animals best fitted to our wants, both with reference to food and to clothing; the articles raised* and manufactured at home that are sold in exchange for foreign articles. These topics should occupy the attention of the children, until they have some knowledge of articles found upon the table and in the wardrobe.

To make the matter more definite, it will be sufficient to treat of the following articles of food and of apparel :

Of Food.—Different kinds of flour and meal, as wheat, rye, corn and oats, and the modes of preparation of each; bread of different kinds, and how made; butter and cheese; meats, as beef, pork, mutton, poultry, fish, how prepared for market and how cooked; salted meats; sugars of different kinds, and how made; tea, coffee, and chocolate.

Of Apparel.—Name five articles each, made of wool, of cotton, and of silk; two articles made of flax; how silk, cotton, wool and flax are obtained, what articles are made from leather and how leather is manufactured.

Oral Geography.—The features of a continent may be illustrated by things that come within the observation of child almost every day.

The facts of geography should be made attractive by many and simple illustrations. After a rain storm there may be found in the school-yard miniature representations of islands, capes, bays, rivers, isthmuses, straits, peninsulas, etc., etc. The child's capacity to estimate distances should be cultivated, so that he may expand the little miniature world before him in the playground into the real world.

He may sketch the block upon which he lives, giving the names of the streets bounding it, and locating prominent buildings as well as his own residence. This sketch may be extended by degrees until he has a general idea of the map of

the city. Proportion should be carefully observed and relative distances maintained.

An outline map in the school room will aid the teacher in this part of her work. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

FIFTH GRADE.

OUTLINE.

Language and Vocal Culture.—Fourth Reader, first half and half of Introduction. Phonic Analysis as given in the Reader. Construction of sentences as in the Sixth Grade, and written reviews, special attention being given to punctuation, capitals, and the proper use of pronouns. Definitions. *Spelling*—oral and written, from Speller, with such abbreviations as are made of words spelled. *Music*—Reading.

Numbers.—Reading and writing numbers to three periods. Addition, subtraction, multiplication and division; numbers in no case exceeding three periods, multiplier three figures, divisor one figure. Rapid combinations. Intellectual arithmetic.

Geography.—Primary Geography through the United States. Map-drawing from copy.

Writing and Drawing.—Writing with ink in copy-book. Drawing from cards.

Miscellaneous.—Morals and Manners, as in previous grades. Physical exercises as in previous grades. Classification of animals. Trees, fruits and flowers. Weights and measures.

PROGRAMME.

Two or Three Classes — Eight or Ten Class Exercises — Four or Five General Exercises.

§ 37. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

SPELLING. See § 10.

DEFINITIONS. See § 31.

Phonic Analysis.—One point should be taken up at a time and mastered, with frequent reviews of what has been previously learned, especially in cases of possible combinations of sounds already learned with the one under study. The attention of the class must be held to the subject of the lesson, and with the understanding that a little well done is better than much superficial work.

CONSTRUCTION OF SENTENCES. See § 11.

ABBREVIATIONS.

Music.—Instruction given by Music Teacher.

§ 38. NUMBERS.

WRITTEN NUMBERS. See § 14.

INTELLECTUAL ARITHMETIC. See § 13.

A few suggestive exercises are given here: What is the difference between six times four, and ninety-six divided by eight? and others like it. Beginning at five times three, count by threes, or fours, or fives, as far as seven times eleven. From thirty-six divided by four, count by fives till you reach a point nearest nine times seven. An almost infinite variety of such exercises may be prepared by the teacher and assigned to the class.

Such exercises, together with those suggested under previous grades, will furnish a constant and thorough review of all the tables.

§ 39. GEOGRAPHY.

Primary Geography.—Much reliance must be placed upon map-drawing, that the pupil may gain some more permanent knowledge than memorizing of the text will secure.

Map drawing should be confined to imitations of the maps before him, and credit should be given for a neat map of good proportions, without reference to the scale upon which it is drawn. The scale should be determined by the size of the

paper, or of the slate used. It is better, however, to enlarge than to diminish the scale of the map used as a copy, provided only that proper proportions be preserved.

A little practice upon drawing of coast lines, rivers, and mountain chains will add beauty to the maps and increase interest in the study. Pupils in geography may imagine themselves travelers and be called upon to give direction of route, prominent natural objects observed, the location and size, as compared with their own city, of a few important cities, and the means of travel, whether by rail, boat or otherwise.

WRITING.

DRAWING.

§ 40. MISCELLANEOUS.

Classification of Animals.—Following the preceding grades in which animals, domestic and wild, have been considered, it is desirable that children should be taught to classify the animals about which they have learned, and here is introduced the general classification into beasts, birds, fishes, insects and reptiles. The animals about which they have already learned something, may now be re-examined with reference to the particular class to which they belong, and other examples of each of these classes may be presented. The distinguishing features, or rather such as are most readily recognized by the child, should be carefully considered.

Such as their structure — vertebrate or invertebrate,—biped or quadruped,—warm-blooded or cold-blooded,—their methods of locomotion, walking, flying, swimming, or creeping,—the elements in which they live, air, earth, or water,—their peculiar habits of life, etc.

Trees.—Such trees as children have the opportunity of seeing and of studying should be selected. Their general structure, their bark and their leaves, may be discussed in such a way as to teach a child the difference between an oak, a hickory, a maple, a cottonwood, an elm, a pine, and a cedar, etc. Their method of growth, the uses of their roots, and of their leaves, should be understood.

Plants and Vegetables.—The names of the more common garden and house plants, and their manner of growth, their times of flowering, etc., belong to this grade. All garden vegetables, especially such as are esculents may be discussed as to their manner of growth, from the first sprouting of the seed to the full development of the vegetable, and as to their form, size, color and parts.

Fruits and Flowers.—Fruits will have found a place among articles eaten, but should be taken up again in connection with flowers, till the full process from the first opening of the flower to the perfection of the fruit is understood. The fruits are to be treated as containing the seeds, or as the seeds themselves, that will bring forth other flowers and fruits.

In discussing flowers, the prominent parts of the flower should be shown, and their names and uses learned, such as stem, calyx, petals, stamens, pistils, pollen, and seed-vessels. The enlargement of the seed-vessel, as in the apple, pear, etc., and the beautiful illustration of the use of pollen, as seen in the growth of corn, especially when different kinds of corn are planted near each other, may be made a profitable study.

Weights and Measures.—The child will here be required to estimate both weights and measures. Each school should be furnished with standards of comparison, so that the accuracy of the child's knowledge may be tested. So far as measures are concerned, the most convenient standard may be made out of a pointer, by putting brass tacks with small heads at distances of one inch, three inches, six inches, nine inches or one-quarter yard, one foot, one-half yard and one yard from the end, or small sticks of various lengths may be used. Children should be required to draw lines of different lengths and apply the measure after they have been drawn. So may lines or figures of certain lengths or surfaces be divided evenly or unevenly, always applying the test after the work has been done.

Let the class, at a given signal, draw lines one foot in length, and teacher and pupils test the accuracy of the work by applying the standard. After successful trials, represent combinations of the standards in lines of two and three feet.

Now let the pupils apply these units to space and objects in the room.

Again, let the pupils draw lines one foot in length, and divide each line into two equal parts; each of these parts into two other equal parts, continuing the division till the line has been divided into inches. Having a clear idea of the above units, assume points at the distance of an inch, a foot, two feet, and a yard, and let them be connected first by continuous lines, and afterward by dotted lines.

Around a given point, as a centre, at a distance of one inch, let a circumference be drawn. Around the same center, at the distance of two inches, a second circumference; at the distance of three inches, a third. In this manner let successive circumferences be drawn until the distance from the center to the last is twelve inches. The exercise may be varied by increasing or diminishing the distances.

The above exercises may serve the double purpose of educating the eye in the measurement of distances and as preliminary to Map Drawing. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

FOURTH GRADE.

OUTLINE.

Language and Vocal Culture.—Fourth Reader completed. Phonic Analysis from the Reader. Elementary Grammar, such as is generally found in Introduction to Grammar. *Spelling*—Oral and written, with abbreviations of words usually abbreviated. Music. Declamations and recitations.

Numbers.—Rudiments of Arithmetic to division of fractions; Intellectual Arithmetic; rapid combinations.

Geography.—Primary Geography completed. Map-drawing from memory.

Writing and Drawing.—Writing in copy-books and writing spellers. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Kinds and properties of matter. Metals and metallic ores. Rectangular and spherical solids.

PROGRAMME.

Two Classes — Eight Class Exercises — Six General Exercises.

§ 41. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

SPELLING. See § 10.

PHONIC ANALYSIS. See § 37.

ABBREVIATIONS.

Grammar.—Though a text-book is used in this grade, instruction should be largely oral. It is not desirable that all the critical observations pertaining to the science should be studied by the pupil, at least not until a later period, when the whole subject is reviewed. Practice is worth more than precept in this study. Hence illustrative exercises of the rules given, especially in connection with the errors noticed in the every-day conversation of the children, will be of great value. If the study of grammar be extended so that what is learned

then is applied to all the speaking and writing of the child, it will be less dry and more valuable. Every recitation should include the use of language. As additional exercises, the pupil may be required to bring to the class a large number of words, which are names of objects — afterwards of objects limited somewhat as those having life or destitute of life, etc., introducing thus a review of "The Oral Course." Selecting an object, at first a living object, require simple sentences that shall assert what the object does, each sentence containing but one verb. Following this course of synthesis, other sentences may be prepared that shall include modifying words, first adjectives, then adverbs. Farther on other words may be introduced, until all the parts of speech are understood in their general uses. Analysis of sentences constructed should follow; each pupil taking the sentence of some other pupil. Theory must in this grade give place to Practice.

Music.—Instruction by Music Teacher.

DECLAMATIONS AND RECITATIONS. See § 12.

§ 42. NUMBERS.

Written Arithmetic.—As stated in a previous section, the greatest difficulty in the path of a pupil is, to acquire facility in the application of principles learned to examples of varied form and phraseology. The teacher should, therefore, study to present examples in great variety of form, still involving the principle underlying the lesson. Questions should be varied in form, even though the same answer be required, until the pupil forgets formulas, and lays fast hold of principles. This will require time, patience, and a great deal of ingenuity on the part of the teacher. Pupils should always receive some credit for correct analysis and correct reasoning, even if the answer be wrong. It is better to have correct reasoning and a wrong answer, than correct answers with no reasoning at all. The best thing of all is, correct answers obtained by a correct process of reasoning. The process by which the result is to be obtained should be called for frequently during a recitation; and in all cases where a new

example is given, some pupil of the class should be required to give the process of solution. The thorough training of pupils in the earlier stages of study, especially in mathematics, saves much time in the future.

The pupil should be taught the principle underlying every process in the fundamental rules of arithmetic. It is easier for the time to teach the child to place units under units and tens under tens, but the principle which pertains every where is to place numbers of the same denomination under each other for addition.

It is easier to say "Begin at right-hand column," but true principle requires us to — begin at lowest denomination. After adding a column, it is easier to say "put down the right-hand figure and carry the left-hand figure to the next column," but the principle is — to reduce the number you have to the next higher denomination, placing your remainder under the column added, since it is of the same denomination with it, and adding the result of your reduction to the column to which it belongs. The child will see that the result is the same, and will wonder why he should not follow the easier course. The teacher knows that the principle runs through compound numbers as well as simple numbers, and once learned it is a great help in the future progress of the child. A little care now, saves much wonder and perplexity in future grades. These hints apply to all the fundamental rules as well as to Addition, and will prove of greater value in Subtraction and Division than in Addition and Multiplication. See § 14.

INTELLECTUAL ARITHMETIC. See § 13.

Combinations — Brief but rapid exercises will serve as awakeners if sprung suddenly upon a listless class.

§ 43. GEOGRAPHY.

Map-Drawing. — In addition to instructions given upon the subject of map-drawing for other and lower grades, (see § 39) the following suggestions are valuable :

Select a County or State having regular outlines. Select a scale with some convenient unit of measure. After determining the position of the cardinal points, draw dotted lines at right angles to each other, one representing the central meridian, the other the central parallel. Apply the scale to the meridian as many times as the distance represented by it is contained in the distance between the north and south points of the country to be drawn. Through the points of division, draw dotted lines at right angles to the meridian, which will represent parallels of latitude. Apply in like manner to the central parallel, such part of the scale as a degree of longitude is of a degree of latitude. Through the points of division draw dotted lines at right angles to the parallel. These will represent meridians. Designate the parallels and meridians by numbers expressing the position of points or places through which they pass, learned from an atlas.

The frame of the map being complete, represent by dots the prominent points of the boundary, the latitude and longitude of which have been previously learned. Having fixed in the mind the nature and direction of the boundary line, it should be drawn wholly from memory. The boundary completed, the most prominent natural features should be represented.

The pupil now has before him a map of his own construction, in which he can not fail to be interested.

Teachers will find other methods equally valuable and perhaps better in their hands than this. The methods of triangulation, and of drawing by a fixed scale, taking some known dimension of State or Country as the basis, are very valuable.

WRITING.

DRAWING.

§ 44. MISCELLANEOUS.

Kinds and Properties of Matter.—Define and illustrate the three general classes of matter; solids, liquids and gases. Define and illustrate their essential properties; extension, im-

penetrability, weight or gravity, and divisibility. A few other prominent properties of matter, such as elasticity, malleability, ductility, etc., should be illustrated. Inertia should be quite fully discussed and its laws thoroughly understood.

Metals and Metallic Ores.—Which are the precious metals? Which are the most useful of the metals? Which the heaviest? Which is a fluid?

Object lessons on iron, zinc, tin, copper, lead, mercury, silver, gold; on steel, brass, pewter, etc.

Methods of smelting ores may be briefly explained, and the localities from which metals are obtained should be pointed out upon the map.

Spherical and Rectangular Solids.—These may embrace the sphere, the cylinder and the cone; the prism, the pyramid, the cube, and the parallelopiped. Further than these there seems but little necessity for carrying the exercise until Geometry is studied as a science. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

THIRD GRADE.

OUTLINE.

Language and Vocal Culture.—Fifth Reader, first half, and half of Introduction. Phonic analysis. Orthography and etymology in grammar. *Spelling*—Oral and written, from Speller, with abbreviations of words abbreviated. Declamations and recitations. *Music*—reading.

Numbers—Rudiments of Arithmetic completed; Intellectual Arithmetic; rapid combinations.

Geography.—Geography, through United States.

Writing and Drawing.—Writing in copy-books and writing speller. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Air and water. Laws of motion.

PROGRAMME.

Two Classes — Eight Class Exercises — Four General Exercises.

§ 45. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

The Historical Sketches of authors, or of characters presented for study, should be made a part of the exercises in this and in succeeding grades. It is not desirable in these sketches, that all the points touched by historians be brought out. In the sketches given of individuals, let the following points be made prominent:—When and where born, early advantages and how improved, early trials and how overcome, one or two anecdotes of early history that had a marked bearing upon the life of the man, what noteworthy acts have rendered the character famous? what traits of character are worthy of our imitation? where and when did they die?

Under the head of early advantages or early trials, will come the home influences, the school privileges and the associates of the child. Such facts should be gathered as would naturally interest children, and awaken just enough curiosity to lead the child to seek for further information in the histories within his reach. The child should be made to feel that

the individual, whose character he studies, had a real and a human existence; that he was like men now-a-days in many, if not in all respects, and that a reproduction of the same character, though living in different times, and of course doing different things, is possible. There are boys living who will bear the same relation to the times in which they live, as did Columbus, Cortez, Washington or Franklin to the times in which they lived. They will not do the same things, but they may do things as important. See § 18.

SPELLING. See § 10.

ABBREVIATIONS.

DEFINITIONS.

PHONIC ANALYSIS. See § 37.

Grammar.—The instruction given in the previous grade may be very profitably extended here, still keeping Practice ahead of Theory. Other words than those given in the text-book should be declined, conjugated or compared, that the pupil may acquire facility in the use of language. It is well in all conjugation of verbs, to construct a simple sentence, as,

“*I am* at school.”

“*Thou art* at school,” etc.

“*I have written* my lesson.”

“*Thou hast written* thy lesson,” etc.

DECLAMATIONS AND RECITATIONS. See § 12.

Music.—Instruction given by Music Teacher.

§ 46. NUMBERS.

WRITTEN ARITHMETIC. See § 14.

INTELLECTUAL ARITHMETIC. See § 13.

COMBINATIONS.

§ 47. GEOGRAPHY.

Illustrations should be constantly given with the globe, in connection with the recitations from the text-book, and no

definition should be passed by till the teacher has satisfactory evidence that the pupils understand clearly the object described.

MAP DRAWING.

WRITING.

DRAWING.

§ 48. MISCELLANEOUS.

Air and Water.—Component elements of air; of water. Proportion of oxygen and nitrogen in the air. Relation of oxygen to life; to combustion; most abundant of all known substances. Properties of nitrogen; of hydrogen; weight of hydrogen.

Four or more lessons on the common properties and uses of water. Hard and soft water; water of the ocean, etc.

Simple experiments, illustrating the pressure of the air, may be performed in the presence of the class. Fill a tumbler perfectly full of water, place over its top a piece of writing paper, larger than the top of the tumbler, and then pressing down the palm of the hand upon the paper, raise and invert the tumbler and remove the hand; the pressure of the air upward will prevent the water from falling out. Take a quarter of a dollar, or any metal of like shape, cut a piece of paper of the same size, and holding them apart from each other drop them to the floor, the metal will fall quickest; but place the paper exactly upon the metal and let them drop, they will fall in the same time, the money having removed the pressure of the air from beneath the paper. A glass tube may be placed in water and the mouth applied to the upper end, by drawing in the air the water will rise, owing to the downward pressure of the air upon the water outside the tube. Take a bent tube, fill it with water, and close one end with the thumb while the effort is made to draw up the water at the other end, and the effort will prove futile until the thumb be removed. Insert an open tube in a vessel of water, and closing the upper end with the thumb, remove the tube, and the water will remain in the tube.

Laws of Motion.—Attention should be given mainly to the laws of falling bodies; to the effects produced on the motion of bodies acted upon by more than a single force; to the centripetal and centrifugal forces; and to the manifold cases of resultant motion found in all cases of sailing a boat, flying a kite, rowing, flying, swimming, etc., etc. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

SECOND GRADE.

OUTLINE.

Language and Vocal Culture.—Fifth Reader completed. Phonic analysis. Declamations and recitations. *Spelling*—Oral and written, from Speller, with abbreviations of words that are abbreviated. *Grammar*—Syntax. Written abstracts. *Music*.

Numbers.—Arithmetic, through simple interest Intellectual Arithmetic. Forms of bills and receipts. Rapid combinations.

Geography and History.—Geography to Asia. Map-drawing. History to J. Q. Adams' Administration, beginning at the Revolution, with lessons on the Government of the United States.

Writing and Drawing.—Writing in copy-book and writing speller. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Respiration, circulation and digestion. City Government and Officers.

PROGRAMME.

Two Classes—Six Class Exercises—Four General Exercises..

§ 49. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

In this grade and in the first grade, I would recommend the occasional practice of writing out the reading lesson in full, and of reading the same from the manuscript. The manuscripts should also be carefully examined as to chirography, spelling,

punctuation, margin, and general divisions of the lesson into paragraphs.

SPELLING. See § 10.

DEFINITIONS.

ABBREVIATIONS.

PHONIC ANALYSIS. See § 37.

Grammar.—Much time may be profitably spent in correction of False Syntax and in the application of rules to the corrections made. Pupils may be encouraged to criticise each other in a proper spirit.

WRITTEN ABSTRACTS. See § 19.

DECLAMATIONS AND RECITATIONS. See § 12.

Music.—Instruction given by Music Teacher.

§ 50. NUMBERS.

WRITTEN ARITHMETIC. See § 13.

The principles involved in Decimals and in Compound Numbers are precisely the same, so far as fundamental rules are concerned, as those previously learned in Simple Numbers, and as this grade calls for a review of what has been previously learned in great measure, it is a good plan so to connect Simple Numbers, Compound Numbers and Decimals, as to show clearly the identity of principles. A thorough mastery of Decimals will be of great service in Percentage, and no superficial study will aid in the end, however rapidly the pupil may appear to advance for the time being.

INTELLECTUAL ARITHMETIC. See § 14.

COMBINATIONS.

Forms of Bills and Receipts.—This exercise may serve as a *Writing* exercise and as an exercise in *Arithmetic*, the pupil being encouraged to draw bills that shall include work required in simple mercantile transactions.

§ 51. GEOGRAPHY AND HISTORY.

Geography and Map Drawing. — Lessons in Geography should be accompanied by brief historical sketches of important events connected with the different countries, and by some allusions to ancient geography, and the changes through which the countries have passed in their governments, boundaries, etc.

One of the most common faults in teaching Geography, is the practice of requiring pupils to learn the names of a large number of unimportant places, the exact population of unimportant cities, etc., etc.

One of the best modes of reciting history, geography, etc., is by the use of topics. Thus, in geography, a pupil passes to an outline map, drawn on the blackboard, with a set of topics in his hand, as boundaries, rivers, mountains, climate, surface, soil, productions, commerce, etc., and proceeds to describe the country assigned, stating all he recollects under each topic. When his description is completed, other members of the class are called on for corrections and additions, and the teacher makes such suggestions as the case may require. This mode of reciting by topics leaves the pupils in a great degree to their own resources, secures a more thorough and systematic preparation of the lessons, and furnishes important aid in imparting that discipline of mind which is more valuable than knowledge. It will be found particularly adapted to reviews. See §§ 39, 43.

History.—While the class is reciting History some pupil should stand by the Outline Map and point out to the class the places spoken of.

Care should be taken that the memory of the child be not burdened with trifling and unimportant facts. The leading points should be seized upon and their relation to other leading facts be understood. The most prominent points in United

States history should be associated with dates. In regard to others, it matters but little whether the exact date be remembered.

Government of the United States.—The text book adopted by the Board bearing upon the duties and rights of citizens needs no comment. Such portions of it as pertain exclusively to the United States will be studied in this grade.

WRITING.

DRAWING.

§ 52. MISCELLANEOUS.

Respiration, Circulation, and Digestion.—Very much instruction upon the laws of hygiene should be given at all times throughout the entire course. Here, as elsewhere, attention should be paid to the posture of children, to their cleanliness, to their habits of dress, of eating and of sleeping. But in this grade special attention should be given to the organs of *Respiration, Circulation and Digestion*; the lungs, the heart, the stomach, and the following more specific topics; mastication, the teeth, saliva, digestion, chyme, chyle, nutrition, the blood, blood-vessels, structure and office of the heart, circulation of the blood through the system, impurities, waste of the system, how repaired, proper and improper food, eating too much, too fast, too often, late in the evening, irregularity of meals, dyspepsia, alcoholic drinks.

Structure and office of the lungs, respiration, capacity of the lungs, exercises for their healthy development, obstructed action, dangerous habits of bending over desks, process of purifying the blood, different colors; carbonic acid of the breath, how formed, amount, composition of carbonic acid, weight, relation to life, experiment of a lighted candle in air that has been held in the lungs a few seconds, carbonic acid in wells, burning charcoal in a close room, carbonic acid in the stomach, soda fountains, raising bread, ventilation, inhalation of gas and its deleterious effects.

City Government and its Officers.—This topic embraces only our own city, and yet in connection with the text-book

required in this grade touching upon citizen's duties and privileges, it may be extended somewhat beyond its design. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

FIRST GRADE.

OUTLINE.

Language and Vocal Culture.—Selections from Fifth Reader and other text-books. Phonic Analysis. Declamations and recitations. *Spelling*—Oral and written, from the Speller. *Grammar*—Analysis and parsing selections from Reader, with review. Epistolary composition. Music.

Numbers.—Arithmetic completed. Intellectual Arithmetic. Rapid combinations. Forms of drafts, bills, promissory notes, checks, etc.

Geography and History.—Geography completed. Map-drawing. History completed and reviewed, except early settlements and colonial wars.

Writing and Drawing.—Writing in copy-books, and in writing speller. Drawing from cards.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Meteorology. Popular astronomy.

PROGRAMME.

One Class ; if the class be large it may with propriety be separated into two sections, that the teacher's time may be fully employed and yet the class have opportunity for study.—*Four Class Exercises.*—*Four General Exercises or Eight Class Exercises if there be but one class.*

§ 54. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

Spelling.—Special attention should be given to the analysis of derivative and of compound words, with the meaning and use of the more common prefixes and suffixes. A few rules of spelling should be taught, and their application illustrated by familiar examples. See § 10.

DEFINITIONS.

PHONIC ANALYSIS. See § 37.

Grammar.—At least half the time appropriated to grammar in the first grade, should be spent in parsing and analyzing select pieces from Milton, Pope, and other authors, embracing the different varieties of style. The extracts required for this purpose may be selected from the reading book.

No exercise should be regarded as complete and satisfactory that does not analyze the thought as well as the language of the writer.

Pupils of this grade should receive special instruction in letter writing, including the form and manner of beginning and ending, with the date; paragraphs; dividing between syllables at the end of the line; margin; folding; superscription; sealing, etc.

Music.—Instruction given by Music Teacher.

§ 54. NUMBERS.

WRITTEN ARITHMETIC. See § 13.

A very careful review of the arithmetic, so far as its more practical portions are concerned, should be given.

INTELLECTUAL ARITHMETIC. See § 14.

COMBINATIONS.

FORMS. See § 50.

§ 55 GEOGRAPHY AND HISTORY. See §§ 39, 43.

WRITING.

DRAWING.

§ 56. MISCELLANEOUS.

Meteorology.—Six or more oral lessons on winds, clouds, fogs, dew, frost, moisture settling on a vessel of cold water in a warm room, rain, snow, hail, ice.

Popular Astronomy.—Ten or more elementary lessons. The earth—its size and motions. Change of seasons—how caused; difference in the length of days and nights at different seasons of the year; length of the longest day at the equator; at the tropics; at the polar circles; at the poles. Tides. Solar system. The sun—its office, distance, magnitude, spots. The moon—its size, distance, telescopic appearance, different phases. Eclipse of the moon, of the sun. Name the planets in their order, relative size, satellites; rings of Saturn. Morning and evening stars. Comets. Fixed stars.

Teach the pupils to point out, in a clear night, five or more conspicuous constellations; five or more stars of the first or second magnitude; all the larger planets that are above the horizon. See § 18.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

HIGH SCHOOL CLASS.

OUTLINE.

Language and Vocal Culture.—Sixth Reader. Phonic Analysis. Declarations and recitations. *Spelling*—Oral and written, from all the text-books. Rhetorical and grammatical analysis. Composition writing. Music.

Numbers.—Arithmetic, Philosophy of; Algebra to Quadratics; Intellectual Arithmetic.

Geography and History.—Physical Geography. Outlines of General History, with Early Settlements of United States and Colonial Wars. National and State Governments.

Writing and Drawing.—Writing in copy-book and in writing speller. Drawing from cards.

Physiology—Elementary.

Miscellaneous.—Morals and manners as in previous grades. Physical exercises as in previous grades. Elements of Philosophy (sound, light, heat, electricity and magnetism). Geology, elements of.

PROGRAMME.

Same as for First Grade Class.

§ 57. LANGUAGE AND VOCAL CULTURE.

READING. See § 9.

SPELLING. See § 10.

DEFINITIONS.

PHONIC ANALYSIS. See § 37.

RHETORICAL AND GRAMMATICAL ANALYSIS.

Composition Writing. See § 11. And yet this grade should cover more than is intended in the other grades. The pupil's general knowledge, and his specific knowledge of Grammatical Analysis, will enable him to take up topics outside of his text-book studies and to treat them originally. His compositions should now become essays, and he should be called upon to read them before his class.

Music.—Instruction given by Music Teacher.

§ 58. NUMBERS.

Algebra.—This introduces new matter to the pupil, and matter exceedingly dry, unless seasoned with the life and tact of the teacher.

Arithmetic.—What is gained in a general way from the study of Algebra may be practically applied to a review of Arithmetic, and the pupil, by a general solution of algebraic problems, may form his own rules for solving the same arithmetically.

Intellectual Arithmetic.—All problems presented in Algebra and Arithmetic should be solved as far as possible mentally.

§ 59. GEOGRAPHY AND HISTORY. See § 51.

Physical Geography.—While this subject is treated of separately, it still may be very profitably associated with Political Geography, and the latter may be reviewed while the former is studied.

National and State Governments.—The text-book used in the Second Grade will be completed and reviewed in this.

PHYSIOLOGY.

WRITING.

DRAWING.

§ 60. MISCELLANEOUS.

Sound.—How produced. Illustrate by a stretched cord or some other vibrating body. Action on the ear. High and low sounds—how produced. Relation of the air to sound. Velocity of sound. The human voice. Varieties of the human voice. Name twenty different kinds of sounds. Echoes; whispering gallery; ear-trumpet. Musical instruments; bells.

Light.—Luminous bodies. Velocity of light. Difference between the light of the sun and that of the moon. Laws of reflection; mirrors. Refraction; experiment with a piece of

money in a bowl of water. Action of the microscope and telescope. Solar spectrum; rainbow. Structure and action of the eye. Danger of injuring the eyes from excessive use; from imprudent exposure to light; from reading in twilight; from reading fine print. Danger of allowing young children to look steadily at a light. Average distance at which a book should be held from the eye; effect of holding a book too near the eye. How cats and other animals see in the night. Cause of color. Twilight.

Heat.—In expanding the following topics, explain and apply the principles, and illustrate them as far as practicable. Sources of heat; sensations of heat and cold; burning-glasses; good and poor conductors; different kinds of clothing; double windows; ice houses; use of a fan; protection of the ground by snow. Contraction and expansion; putting tire on a wheel; fire balloons; thermometer; glass cracked by hot water; why clocks go faster in cold weather than in warm; how to regulate a pendulum clock when it gains or loses time; freezing water; heat absorbed by change from solid to liquid state, and from liquid to gaseous; freezing mixture of salt and ice; cooling a heated room by sprinkling water on the floor. Boiling water; how the force of steam is produced. Flame—how produced. Carbon. Flame of a candle—why no combustion in the centre; wick—why not consumed; use of circular wick in astral and solar lamps; use of glass chimney; of small hole in top of lamp; gas used in lighting buildings; use of a blower in kindling a fire; action of a common chimney; proper construction; advantages of stoves as compared with open fire-places, disadvantages.

Electricity and Magnetism.—Illustrate the production of electricity, and properties of attraction and repulsion, by a rubber ruler rubbed briskly with a piece of woolen cloth. Conductors and non-conductors; lightning and lightning conductors; Franklin's kite.

Properties of the magnet. Magnetic needle, mariner's compass, horseshoe magnet, telegraph.

Upon these topics what is needed is, to call the attention of the pupil to the phenomena of nature, and to draw the lessons

from these rather than from any scientific treatise. In the matter of electricity, the flying apart of the hair when combed briskly in cold weather, the effect of water in making it smooth, the effects of strokes of lightning upon objects that the children have seen; and in magnetism, the use of the magnetic tack hammer, the effect of a magnet as shown upon a little pocket compass, etc., etc., will interest and profit the pupils more than merely scientific treatises. *What is done*, is first to be learned. The *theories* regarding the methods may be neglected until the science is studied more fully.

Geology. — Five or more oral lessons on the geological formation of the United States; coal fields; mineral ores; geology of Illinois; fossiliferous rocks.

PHYSICAL EXERCISES. See § 3.

MORALS AND MANNERS. See § 4.

HIGH SCHOOL.—GENERAL DEPARTMENT.

OUTLINE OF COURSE.

YEARS.	TERM.	MATHEMATICS.	NATURAL SCIENCE.	HISTORY.	ENG. LITERATURE.	* LANGUAGES.
I.	First.....	Geometry.....	Natural History...	Universal History.	.....	German, or French, or Latin.
	Second....	Geometry.....	Botany	Universal History.	.....	German, or French, or Latin.
	Third.....	Geometry.. ..	Botany	Universal History.	.....	German, or French, or Latin.
II.	First.....	Higher Algebra	Mechanics .....	.....	Rhetoric	German, or French, or Latin.
	Second....	Spherical Geometry.....	Chemistry .....	.....	Eng. Literature....	German, or French, or Latin.
	Third.....	Algebra and Geometry	Mech. and Chem....	.....	Rhet. and Eng. Lit. _____	German, or French, or Latin.
III.	First... .	Trigonometry and Mensuration	Physics .....	.....	.....	German, or French, or Latin.
	Second....	Astronomy	Physics .....	.....	English Classics...	German, or French, or Latin.
	Third.....	Trigonometry reviewed.....	Physics .....	.....	English Classics...	German, or French, or Latin.
IV.	First.....	.....	Geology	Political Science..	.....	German, or French, or Latin.
	Second....	.....	.....	Political Science...	English Classics...	German, or French, or Latin.
	Third.....	.....	.....	Political Science...	English Classics...	German, or French, or Latin.

Mental Science is required during first and second terms of fourth year.

* One language may be pursued, such as the pupil prefers, with liberty to change at the end of two years.

HIGH SCHOOL.—*CLASSICAL DEPARTMENT.

OUTLINE OF COURSE.

YEARS.	TERMS.	MATHEMATICS.	LANGUAGES.	ELECTIVE STUDIES.
I.. {	First.....	Algebra.....	Latin.....	{ Any study of General Department of first year.
	Second.....	Algebra.....	Latin.....	
	Third.....	Algebra.....	Latin.....	
II.. {	First.....	Geometry.....	Latin.....	{ Any study of General Department of second year.
	Second.....	Geometry.....	Latin and Greek....	
	Third.....	Geometry.....	Latin and Greek....	
III. {	First.....	Latin and Greek....	{ Any study of General Department of third year.
	Second.....	.....	Latin and Greek....
	Third.....	.....	Latin and Greek....
IV. {	First.....	Latin and Greek....	{ Any study of General Department of fourth year.
	Second.....	.....	Latin and Greek....
	Third.....	.....	Latin and Greek....

* This department is arranged for four years, but may be completed in three years, by omitting the elective study. In the four-year course one elective study must be taken.

Pupils will enter the Classical Department directly from the First Grade of the Grammar Schools, or from the High School Classes of the Grammar Schools, as preferred. In the latter case Algebra will be omitted, and Universal History substituted therefor.

The third term is designed as a review in all cases.

HIGH SCHOOL.—NORMAL DEPARTMENT.			
OUTLINE OF COURSE.			
YEARS.	FIRST TERM.	SECOND TERM.	THIRD TERM.
I.	Arithmetic. Algebra. Geography and Map Drawing. Geometry.	Grammar. Algebra. Geography and Map Drawing. Geometry.	Physical Geography. Outlines of General History. Botany.
II.	Natural Philosophy. Physiology. Book-keeping, half term. Rhetoric. Constitution U. S., and Principles of Government.	Natural Philosophy. Chemistry. Mental Philosophy.	Arithmetic, half term. Geography. Grammar. Astronomy.
Reading, through the entire course. Composition, through the entire course. Practice of Teaching, through the entire course. Singing, through the entire course—one lesson per week. Drawing, through last four terms—two lessons per week. Theory of Teaching, last two terms. Physical Exercises, through the course.			

APPENDIX.

TEXT BOOKS USED IN THE HIGH SCHOOL.

GENERAL DEPARTMENT.

1. Preparatory Studies reviewed, using the text books authorized in the District Schools.
2. Warren's Physical Geography.
3. Universal History.
4. Ancient Geography, in connection with History.
5. Ray's Higher Arithmetic.
6. Robinson's University Algebra.
7. Davies' Legendre.
8. Plane and Spherical Trigonometry.
9. Mensuration.
10. Gillespie's Surveying.
11. Navigation.
12. Hanaford & Payson's Elementary Book-keeping.
13. Gray's Botany.
14. Elementary Astronomy and Colbert's Astronomy.
15. Physiology.
16. D. A. Wells' Natural Philosophy.
17. Rolfe & Gillet's Chemistry.
18. Geology (Hitchcock's) and Mineralogy.
19. Coppee's Rhetoric.
20. Wayland's Political Economy.
21. Townsend's Analysis of Civil Government.
22. Haven's Mental Philosophy.
23. Etymology.

24. Cleveland's English Literature.
25. Analytical Sixth Reader.
26. Drawing.
27. Vocal Music; Song Garden, Third Book.
28. Woodbury's German Series.
29. Schiller's William Tell, and Schiller's Maria Stuart.
30. Fasquelle's French Course.
31. Chapsal's *Littérature Française*.
32. Goëthe's Egmont.
33. Campbell's New German Course.

CLASSICAL DEPARTMENT.

Nos. 1, 2, 3, 4, 5, 6, 7, 15, 16, 24, 25, 26, 27.

Allen's Latin Grammar.

Allen's Latin Reader.

Arnold's Latin Prose Composition.

Hanson's Latin Prose.

Bowen's Virgil.

Andrews' Latin Lexicon.

Anthon's Classical Dictionary.

Crosby's Greek Grammar.

Crosby's Greek Lessons.

Arnold's Greek Prose Composition.

Felton's Greek Reader.

Boise's Xenophon's Anabasis.

Owen's Homer's Iliad.

Liddell & Scott's Greek Lexicon.

TEXT BOOKS USED IN THE DISTRICT SCHOOLS.

Analytical Series of Readers.

Analytical Speller.

Seavey's Goodrich's History of the United States.

Greene's Introduction to Grammar.

Kerl's Common School Grammar.

Warren's Common School Geography.

Mitchell's Primary Geography.

Robinson's Practical Progressive Arithmetic.

Walton's Primary and Intellectual Arithmetics.

Payson, Dunton & Scribner's Writing Books.

Webb's Charts.

Philbrick's Primary School Tablets.

Webster's Primary Dictionary.

Warren's Physical Geography.

Cutter's Physiology.

Robinson's Elementary Algebra.

Anderson's Outlines of General History.

Alden's Citizen's Manual.

Bartholomew's Drawing Books.

Song Garden, First and Second Books.

Blackman's Graded Songs, Nos. 1, 2 and 3.

Movable Cards with Words and Letters for the use of the Tenth Grade.

Dictionaries.—Webster's and Worcester's Quarto Dictionaries shall be used as authority in Definitions, and Webster's Dictionary as authority in Orthography and Punctuation; but the orthography of any scholar, in exercises of composition, shall not be deemed incorrect if in accordance with either Webster or Worcester.

REFERENCE BOOKS.

The following Books are recommended to teachers for their careful study :

- Page's Theory and Practice of Teaching.
- My Schools and School Masters, by Hugh Miller.
- Welch's Object Lessons.
- Calkins' Object Lessons.
- Barnard's Object Teaching.
- Sheldon's Object Lessons.
- Mayo's Lessons on Objects.
- Northend's Teacher and Parent.
- Fireside Philosophy.
- Youmans' Household Science.
- Herbert Spencer's Works.
- Holbrook's Normal Methods.
- Barnard's American Journal of Education.
- History and Progress of Education.
- Willson's Manual of Instruction.
- Walton's Tablets and Key.
- Northend's Teacher and Assistant.
- Hazen's Professions and Trades.
- Wells' Science of Common Things.
- Manual of Elementary Instruction.
- Model Lessons on Objects.
- Reason Why.
- Wickersham's School Economy.

These books can be found in the Teachers' Reference Library at the office of the Board of Education, and may be consulted there.

TEXT BOOKS FOR TEACHERS ONLY.

Tenth Grade.—Teacher needs a Speller, and will use monosyllabic words in exercises 1-11, 23, 24, 72, 73 and 74. Song Garden, First Book, for rote singing. Blackman's Graded Songs No. 1, to page 14.

Ninth Grade.—Speller, and will use monosyllabic words in exercises 12-20, 26-31, 35, 40, 71, 113. Song Garden, First Book. Blackman's Graded Songs No. 1, completed.

Eighth Grade.—Speller, simple words in exercises 86, 90, 95, 96, 109, 162, 163, 166, 168 and 180. Song Garden, First Book. Blackman's Graded Songs No. 2, to page 25. Primary Arithmetic to fit grade.

Seventh Grade.—Song Garden, First Book. Blackman's Graded Songs No. 2, completed, and No. 3 to page 39.

TEXT BOOKS USED IN EACH GRADE.

TENTH GRADE.

Webb's Cards, Nos. 1, 2, 3, 4, 5, 6, 7 and 8.

Philbrick's Primary School Tablets, Nos. 1, 2, 3, 4 and 9.

NINTH GRADE.

Webb's Cards, reviewed.

Philbrick's Tablets, Nos. 15 and 16.

Analytical First Reader.

EIGHTH GRADE.

Analytical Second Reader.

Graded Songs No. 2, to page 15.

SEVENTH GRADE.

Analytical Third Reader. First half, with half of the Introduction.

Analytical Speller — Sections 22, 25, 32-34, 36-39, 44-49, 81-83, 155-161, 164, 165, 167.

Walton's Primary Arithmetic, to page 50.

SIXTH GRADE.

Analytical Third Reader, completed.

Analytical Speller — Sections 41-43, 50-70, 84, 88; 98, 102, 103, 169, 170.

Primary Arithmetic, completed.

Blackman's Graded Songs No. 2, completed, and No. 3, to page 39.

Writing Book—Payson, Dutton & Scribner's.

FIFTH GRADE.

Analytical Fourth Reader to page 152, with half of Introduction.

Analytical Speller — Sections 76-79, 97-105, 107, 111, 112, 197-203, 231-235, 261, 262.

Blackman's Graded Songs, No. 3.

Mitchell's Primary Geography to page 53.

Writing Book—Payson, Dunton & Scribner's.

Walton's Intellectual Arithmetic, from page 22 to page 48.

FOURTH GRADE.

Analytical Fourth Reader completed.

Analytical Speller — Sections 68, 89, 106, 108, 171-179, 229, 244-250, 263, 264.

Song Garden, Second Book.

Robinson's Rudiments of Arithmetic to Division of Fractions, page 94.

Walton's Intellectual Arithmetic from page 48 to page 90.

Mitchell's Primary Geography completed.

Greene's Introduction to Grammar, to page 54.

Writing Book—Payson, Dunton & Scribner's.

THIRD GRADE.

Analytical Fifth Reader to page 218, with half of the Introduction.

Greene's Introduction to Grammar to page 131.

Analytical Speller — Sections 67, 116-152, 240-243, 265-270.

Song Garden, Second Book.

Robinson's Rudiments of Arithmetic completed.

Walton's Intellectual Arithmetic to page 130.

Warren's Common School Geography to page 53.

Writing Book—Payson, Dunton & Scribner's.

SECOND GRADE.

Analytical Fifth Reader completed.
Analytical Speller, Sections 75, 91-94, 181-196, 204-220.
Song Garden, Second Book.
Greene's Introduction to Grammar to page 189.
Robinson's Practical Arithmetic to page 247.
Walton's Intellectual Arithmetic, review to page 130.
Warren's Common School Geography to page 80.
Seavey's Goodrich's U.S. History from page 100 to page 195.
Alden's Citizen's Manual.
Writing Book—Payson, Dunton & Scribner's.

FIRST GRADE.

Analytical Fifth Reader, Selections.
Analytical Speller, Sections 87, 221-228, 230, 237-239,
271-280.
Greene's Introduction to Grammar completed.
Song Garden, Second Book.
Robinson's Practical Arithmetic completed.
Walton's Intellectual Arithmetic completed.
Warren's Common School Geography completed.
Seavey's Goodrich's History from page 95 through.
Writing Book—Payson, Dunton & Scribner's.

HIGH SCHOOL CLASS.

Analytical Sixth Reader.
Analytical Speller, Sections 153, 154, 215, 251-260, 281-308.
Song Garden, Third Book.
Robinson's Elementary Algebra to Quadratics.
Ray's Higher Arithmetic.
Walton's Intellectual Arithmetic.
Warren's Physical Geography.
Seavey's Goodrich's History from beginning to page 100.
Anderson's Outlines of General History.
Alden's Citizen's Manual.
Physiology.
Writing Book—Payson, Dunton & Scribner's.

FREE GYMNASTICS.

THE following exercises have been quite thoroughly tested in one of our largest schools, and are well adapted to any grade of pupils.

They have been arranged by Miss Emma Hooke, Head Assistant of the Newberry School, who acknowledges herself indebted to the excellent Manual prepared by Mr. Mason, of Boston, for part of the series, as also to Mr. Powers, from whose Gymnasium she graduated. Teachers who desire more complete instructions, will find Mr. Mason's Manual just what they need.

The exercises are arranged to accompany the music of a Piano. The strain played should consist of eight measures. In the absence of an instrument, the teacher may count *one, two, etc., to eight*. Part of the series may be omitted at times, if desired.

PREPARATION FOR EXERCISE.

Sit erect, with hands together upon the desk.

EXERCISE.

Teacher counts or plays.

- One.* Sit erect, with arms folded.
- Two.* Throw the body forward, and place the folded arms upon the desk.
- Three.* Extend both arms upon desk, parallel to each other.
- Four.* Sit erect with shoulders thrown back, arms hanging by side.
- Five.* Rest the head on right hand, and rest right elbow on desk.
- Six.* Change position from right to left hand, as above.
- Seven.* Rest head upon both hands, both elbows resting upon the desk.
- Eight.* Bring hands tightly closed to the chest — elbows thrown back as far as possible.

CHANGE.

- One.* Thrust right arm forward horizontally, and back to position eight, opening the hand as it is thrust forward, and closing it upon drawing it back.
- Two.* Repeat one.
- Three.* Thrust left arm as above.
- Four.* Repeat three.
- Five.* Thrust arms forward, as above, alternately.
- Six.* Repeat five.
- Seven.* Thrust both arms forward, as above.
- Eight.* Repeat seven.

CHANGE.

- One.* Thrust both arms forward horizontally, with hand closed and thumbs turned downward. Twist the arm half round.
- Two.* Twist hands as above.
- Three.* Repeat two.
- Four.* Repeat two.
- Five.* With arms held horizontally forward, open and close hands.
- Six.* Repeat five.
- Seven.* Strike hands together twice.
- Eight.* Strike hands together once, and bring hands back to chest, closed, as in eight of first part.

CHANGE.

Repeat thrusting, twisting and clapping hands as in previous part, thrusting in perpendicular instead of horizontal motions, except in count eight, where the ends of the fingers are brought together with the hands resting upon the top of the head.

CHANGE.

- One.* Extend the right arm out at an angle of forty-five degrees, and return to head.
- Two.* Repeat one.
- Three.* Extend left arm as above.
- Four.* Repeat three.
- Five.* Alternate right and left arms, as above, thrusting left when right returns, etc.
- Six.* Repeat five.
- Seven.* Thrust both arms, as above.
- Eight.* Repeat seven, returning tips of fingers to tips of shoulders.

CHANGE.

One, Two, Three, Four. Throw the shoulders back, press the elbows firmly upon the sides and extend the hands from the waist alternately four times, out and back to the shoulders.

Five. Bring the hands tightly closed to the chest.

Six. Face to the right.

Seven. Rise.

Eight. Face to the front ready for standing exercises.

CHANGE.

One. Thrust right hand downward, open palm outward, and bring it back to chest closed.

Two. Repeat one.

Three. Thrust left hand as above.

Four. Repeat three.

Five. Thrust hands alternately as above.

Six. Repeat five.

Seven. Thrust both hands together as above.

Eight. Repeat seven.

CHANGE.

Repeat same movements with horizontal thrusts to the side instead of downward thrusts.

CHANGE.

Repeat movements with perpendicular thrusts as above.

CHANGE.

Repeat movements with horizontal thrusts forward.

CHANGE.

One. Thrust right arm downward and bring back to the chest.

Two. Thrust left as above.

Three. Bring the hands together twice.

Four. Bring the hands together once and back to the chest.

Five. Repeat four, throwing hands horizontally to side.

Six. Repeat four, thrusting perpendicularly.

Seven. Repeat four, thrusting horizontally forwards.

Eight. Bring hands to the hips.

CHANGE.

- One.* Bend body to the right, bending at the hips.
Two. Erect.
Three. Bend body to the left as in one.
Four. Erect.
Five. Repeat one.
Six. Repeat two.
Seven. Repeat three.
Eight. Repeat four.

CHANGE.

Bend body backwards and forwards as in last exercise.

CHANGE.

Incline head to right and left as in body movements.

CHANGE.

Incline head forwards and backwards as above, bringing hands to the side upon last count.

CHANGE.

- One.* Elevate right shoulder as high as possible.
Two. Repeat one.
Three. Elevate left shoulder as above.
Four. Repeat three.
Five. Elevate right and left alternately.
Six. Repeat.
Seven. Elevate both shoulders.
Eight. Repeat seven and bring hands tightly closed to the chest.

CHANGE.

- One.* Thrust the right arm forward horizontally, bringing the right shoulder as far forward as possible at the same time.
Two. Thrust the left arm and shoulder forward as above, and bring right shoulder back as far as possible without bending the arm.

Continue as above alternately till (Eight) is counted and then bring hands closed to the chest.

CHANGE.

- One and Two.* Keep hands upon chest and raise right elbow as high as possible and return.
Three and Four. Raise left elbow as above.
Five and Six. Alternate.
Seven and Eight. Elevate both, as above.

CHANGE.

Repeat last exercise throwing elbows backward, clasp hands at close upon the chest and throw palms outwards.

CHANGE.

- One.* Keep hands clasped, palms outwards and extend arms horizontally forwards, rising upon tip-toe at the same time and bringing arms back while falling upon the heels.

Repeat seven times, bringing clasped hands over the head with palms upward at eighth count.

CHANGE.

- One.* Keep hands clasped, palms upward and extend hands upward as far as possible, rising upon tip-toe at the same time and bring the hands downward while falling upon the heels.

Repeat seven times and bring the hands to a front horizontal position with palms outwards at eighth count.

CHANGE.

- One.* Elevate hands to vertical position while rising on tip-toe, and back to horizontal position while falling upon heels.

Repeat seven times and bring hands down in front at eighth count, still clasped.

CHANGE.

- One.* Elevate to horizontal position and back, rising upon tip-toe and falling upon heels.

Repeat seven times, and drop the hands at side at eighth count.

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